CITY OF ASTORIA
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COMMUNITY DEVELOPMENT

July 21, 2020

TO: ASTORIA PLANNING COMMISSION

FROM: BARBARA FRYER, CITY PLANNER

SUBJECT: AMENDMENT REQUEST **(A19-03)** PERTAINING TO ADOPTION OF ACCESSORY DWELLING UNIT AND OTHER HOUSING REGULATIONS.

This report supplements the published staff report dated July 14, 2020 with regard to findings for compliance with Statewide Planning Goal 10.

Jean Dahlquist requested additional information about A19-03. She works with the Fair Housing Council of Oregon and Housing Land Advocates ensuring compliance with Statewide Planning Goal 10 for any Post Acknowledgement Plan Amendment (PAPA).

All amendments of comprehensive plans or land use regulations must comply with Statewide Planning Goals (ORS 197.175(2)(a)). In order to satisfy Goal 10 requirements, the City must have completed and adopted a Buildable Lands Inventory and a Housing Needs Analysis. The City adopted its Buildable Lands Inventory and Housing Needs Analysis in 2011, with updated information regarding all amendments affecting buildable acreage.

Estimated Net Land Surplus/(Deficit) by Zoning Designation, Astoria UGB, 2027

Type of Use	R1	R2	R3	AH-MP	Total
Land Need	115.4	51.2	67.0	2.7	236.3*
Land Supply	25.20	74.99	119.18	1.49	220.86
Surplus/(Deficit)	(90.20)	23.79	52.18	(1.21)	(15.44)*

Source: Wingard Planning & Development Services
*Note: Scrivner's Error in actual figure. BLI shows 236.4 and (15.54) but should be 236.3 and (15.44)

In 2011, the Buildable Lands Analysis indicated that there was a surplus of R2 and R3 lands and a deficit of R1 and AH-MP, and a total deficit of 15.44 acres of residentially zoned land.

The following is a list of amendments since adoption of the Buildable Lands Inventory that impacted the amount of land in each zone category that was listed as "buildable" acreage:

Type of Use	Location & total acreage	Commercial (Office/Retail)	Industrial/ Other	Employment Total	R1	R2	R3	AH-MP	Residential Total
Land Need		38.2	11.5	49.7	115.4	51.2	67.0	2.7	236.3
Land Supply		17.1	39.3	56.4	25.20	74.99	119.18	1.49	220.86
BLI Surplus/(Deficit)		**(21.1)**	**27.8**	**6.7**	**(90.20)**	**23.79**	**52.18**	**(1.21)**	**(15.44)**
A11-05	1303 Exchange (8CD 14100 & 14000) 0.22 acres								

A12-02	USCG (18AC 2200; 18AB 3500) 4.85 acres				-0.8	+0.8			
A12-03	620 Olney (17CC 900, 904) 0.46 acres	+0.46		+0.46		-0.46			-0.46
A13-01	1585 Exchange (8DC 17900, 18000, 18100) 0.3 acres	-0.06		-0.06			+0.06		+0.06
A13-02	4050 Abbey Ln (9AA 500) 2.09 acres		-1.29 Ind +1.29 Othr						
A14-03 (not vacant land so no change to BLI)	3930 & 3990 Abbey Ln (9AA, 80000 & 90000 etal)								
A17-02	2350 Marine Drive (portion of 9CBTL6803)	+1.04		+1.04				(1.04)	(1.04)
Final Surplus/(Deficit)		(19.66)	27.8	8.14	(91.0)	24.13	52.24	(1.21)	(16.88)

The Housing Needs Analysis completed by Cogan Owens and Cogan, LLC found that "Easing restrictions on ADU and assuming a certain amount of development of these units would reduce future residential land needs. For example, if accessory units accounted for about 2% of future permanent housing units, the residential land need would drop by approximately 5 net acres."

FINDING: Adopting the ADU modifications will bring the City closer to compliance with Goal 10 requirements by 5 acres.

EXHIBIT 1: City of Astoria Goal 10 Analysis (also known as a Housing Needs Analysis)

City of Astoria
Goal 10 Analysis

This report describes the amount of residential land needed to meet a full range of housing types within the Astoria Urban Growth Boundary (UGB) during the next 20 years. The analysis of housing needs uses the methodology suggested by *Planning for Residential Growth: A Workbook for Oregon's Urban Areas* produced by the Transportation and Growth Management Program (TGM). The steps used in this methodology have been followed to the greatest extent possible, given the data available for Astoria. Since Astoria is a small city, much of the data which is available for larger urban areas, such as Public Use Microdata Samples (PUMS) from the 2000 U.S. Census and detailed historical data from prior versions of the U.S. Census are not available. Consequently, not all of the suggested analysis steps in the Workbook can be completed in full. Much of the work reflected in this report was conducted by Johnson-Gardner, LLC. Cogan Owens Cogan, LLC staff have refined and expanded on that initial work, particularly in evaluating future changes in the mix of different housing types, projections of second home demand, and resulting land needs associated with housing.

When the draft BLI document was presented to the City Council in April 2008, Council expressed concern that some of the parcels identified as "buildable", especially in the residential areas, were not really buildable based on their visual knowledge of the area. The Council asked staff to conduct a more detailed, parcel-by-parcel, "foot on the ground" analysis to provide the best actual figures possible. No issues were raised by the Council on the basic draft economic and demographic analysis or the figures for employment land. Local planning consultant Patrick Wingard, Wingard Planning and Development Services, was subsequently hired to conduct a field investigation of some of the questionable residential parcels since he had local knowledge of the area. In 2010, Mr. Wingard identified these parcels, analyzed them, and conducted additional research concerning deed restrictions, feasibility of development, and actual slope percentages, among other factors based on a visual investigation of each parcel. This is not a typical approach in completing a BLI and therefore staff worked very closely with DLCD to assure that the methodology used to determine the buildable acreage would meet with the State's criteria.

A. POPULATION & HOUSEHOLD GROWTH PROJECTIONS

Following is a summary of projected growth in population and households. This growth, along with housing demands related to the second home market, drive the need for future residential land within the Astoria urban growth boundary (UGB).

1. EXISTING POPULATION & HISTORICAL GROWTH

The 2000 Census showed a population of 9,813 in the City of Astoria and 35,630 in Clatsop County as of April, 2000 (see Table 1). The population within the Astoria UGB includes the sum of the 2000 City population and an estimate of an additional 529 people within the UGB but outside the City limits. The majority of these individuals are students in group quarters at the Tongue Point Job Corps Center located at the former Tongue Point Naval Base.

Table 1: Historic Population Trends, Clatsop County and Astoria UGB (1990-2007)

Area/ Region	Census		Intercensus Estimates						2007 Forecast
	1990	2000	2001	2002	2003	2004	2005	2006	
Clatsop County	33,301	35,630	35,850	36,100	36,300	36,400	36,640	37,045	37,286
City of Astoria	10,069	9,813	9,790	9,790	9,890	9,880	9,910	9,970	9,996
Astoria UGB		*10,342*						*10,507*	10,531
UGB as a % of County		*29.0%*						*28.4%*	28.2%

SOURCE: U.S. Census, Portland Center for Population Research, and JOHNSON GARDNER

2006 Estimates from the Oregon Population Research Center indicate a City population of 9,970, an increase of 157 individuals since 2000. The estimated UGB population increased by only 165 individuals, indicating that very little growth is occurring between the City limits of Astoria and the UGB.

2. POPULATION PROJECTIONS

Population forecasts for Clatsop County and the City of Astoria utilize forecasts outlined in the Clatsop County Comprehensive Plan. These projections have been coordinated with the City of Astoria and other local jurisdictions in the County. Over the next 25 years, the County anticipates relatively modest population growth in Clatsop County and Astoria. Average annual growth rates are expected to range from 0.78% to 0.91% (see Table 2).

Table 2: Projected Average Annual Population Growth Rates, Clatsop County (2005-2030)

Annual Growth Rates	Five Year Intervals				
	2005-2010	2010-2015	2015-2020	2020-2025	2025-2030
Clatsop County	0.78%	0.84%	0.87%	0.91%	0.91%

Because the most recent Comprehensive Plan calculation of forecasted population was in 2004, the projection does not factor recent realized growth since its base period (i.e., the increase in population between 2004 and 2007). To address this issue, population estimates in this analysis apply average annual population growth rates in Table 2 to the most recent 2006 population observation (estimates for 2007 are not yet available). Results are expressed in Table 3. Over the next 20 years, State forecasts suggest that population in Clatsop County is expected to grow by 7,029 individuals.

The Clatsop County Comprehensive Plan assumes that the Astoria UGB will capture its fair-share of anticipated countywide growth, with a projected increase of 1,974 new people in the Astoria UGB between 2007 and 2027.

Table 3: Clatsop County and Astoria UGB Population Projections (2007-2027)

Population Estimates	Annual Estimates					2007-2027
	2007*	2012	2017	2022	2027	Change
Clatsop County	37,496	39,026	40,717	42,552	44,525	7,029
Astoria UGB 1/	10,531	10,961	11,436	11,952	12,506	1,974

* Estimate

1/ Calculated assuming the Astoria UGB can successfully capture its fair share of forecasted County growth

SOURCE: Clatsop County Comprehensive Plan and JOHNSON GARDNER

3. HOUSEHOLD PROJECTIONS

Given the substantial share of population living in a group quarters per U.S. Census Bureau data, this analysis must first identify household estimates for the Astoria UGB derived from household population, exclusive of the number of people living in group quarters. This simply involves subtracting group quarters population from the total population estimate and dividing the result by an average household size. Results of this process indicate a base 2007 count of 4,445 households within the Astoria UGB (see Table 4). The result serves as a base year for household forecasts.

Table 4: Base Year Household Calculation, Astoria UGB (2007)

City of Astoria		Census Year		1990-2000 Change	
	Statistic	1990	2000	Absolute	Percent
	Total Population	10,069	9,813	-256	-2.5%
-	Population in Group Quarters	182	223	41	22.5%
=	*Household Population*	*9,887*	*9,590*	-297	-3.0%
÷	Average Household (HH) Size	2.35	2.26	-0.09	-3.8%
=	*Total HHs*	*4,207*	*4,243*	36	0.9%

Astoria UGB		2000	2007
	Statistic	Census	Estimate
	Total Population	10,342	10,531
-	Population in Group Quarters	739	753
=	*Household Population*	*9,603*	*9,779*
÷	Average HH Size 1/	2.26	2.20
=	*Total HHs*	*4,249*	*4,445*

1/ 2007 Estimate assumes Average Household Size follows exhibited recent trends.

SOURCE: U.S. Census Bureau and JOHNSON GARDNER

Assuming the ratio of group quarters population to total population does not deviate significantly from the status quo, results expressed in Table 5 on the following page represent a forecast of household population over the next 20-years. Again, dividing household population by the average (estimated) household size in each respective period leads to

predictions of future household growth. This analysis assumes the average household size remains roughly the same, consistent with trends during the past decade. About 956 new resident households are expected to be within the Astoria UGB over the next 20 years (see Table 5).

Table 5: Forecasted Household Population, Household Size, and Households, Astoria UGB

Household (HH) Population Forecast[1]	Forecast Year					2007-2027 Change	
Scenario	2007	2012	2017	2022	2027	Absolute	Annual Rate
Astoria UGB	9,779	10,178	10,619	11,098	11,612	1,833	0.86%
Estimated Avg. HH Size[2]	*2.20*	*2.19*	*2.17*	*2.16*	*2.15*		
Household Forecast							
Astoria UGB	4,445	4,647	4,893	5,138	5,401	956	0.98%

1/ Forecasted household population assumes a constant ratio of group quarters to total population and that the Astoria UGB will capture its fair share of Clatsop County population growth as projected by the Clatsop County Comprehensive Plan

2/ Assumes exhibited trends

SOURCE: U.S. Census Bureau, Clatsop County Comprehensive Plan, and JOHNSON GARDNER

B. ECONOMIC & DEMOGRAPHIC HOUSING NEED FACTORS

This section describes how the projected number of new households will be distributed among different housing structure types in 20 years. In order to determine this, we have assessed factors that likely will influence housing choice in the future (e.g., the decision to buy a single-family home as opposed to renting an apartment, the need for housing a seasonal labor force, second homes in recreation areas, etc.).

Major State and national housing and demographic trends, which may influence the housing types that will be needed in the next 20 years, are summarized below. This information about national and State housing trends is a summary of information in Planning for Residential Growth: *A Workbook for Oregon's Urban Areas.*

- Households are becoming smaller. More households are being formed by "empty nesters," young singles, and couples than by the "traditional family".
- Declining household sizes suggest (with other things, especially income, being equal) a shift toward smaller-sized housing.
- Age of the head of the household is increasing. Aging of the baby boomers is the primary cause of this factor.
- Greater household age generally indicates a greater propensity toward home ownership. However, home ownership rates decline in the 65 and older age group. Older households also have a tendency to "trade down" to smaller housing types as their children leave the household.
- Household incomes are generally increasing though they have not kept pace with housing prices or rents. Demand for more affordable housing types (e.g., manufactured homes, apartments, townhouses, and small-lot single-family houses) will increase as housing costs continue to outstrip income growth.

In conclusion, smaller households, older households, and higher housing costs are expanding markets for "alternative housing types" and reducing the demand for traditional large-lot single-family development. Housing types which will see greater demand include smaller-lot single-family developments, manufactured housing, clustered single-family housing, duplexes, condominiums, and zero-lot line houses. Some of these trends are already evident in the form of recent development and current development proposals in Astoria (e.g., the Mill Pond development).

There is generally little to suggest that broader State and regional trends will not similarly shape future housing need in Astoria. Notably, the issue of declining household sizes is seemingly more prevalent in Astoria as compared to the broader State level trends. Between 1990 and 2000, the average household size in Oregon fell from 2.52 to 2.51 while in Astoria the same measure fell roughly 0.09 points from 2.35 to 2.26.

1. HOUSEHOLD COMPOSITION DETAILS

Some of the best indicators of housing needs are data on household incomes by household size and age of head of household. Ideally, an analysis would examine these statistics cross-tabulated against each other. However, cross-tabulation of this data can only be obtained from Public Use Microdata Samples (PUMS) from the 2000 Census for larger metropolitan areas. The smallest geographic level for which PUMS data is available is 100,000 people. The PUMS area that includes the City Astoria contains Clatsop, Columbia, Tillamook, Lincoln, Benton, Linn, and Lane Counties. This information is not useful for conducting a housing analysis for the City of Astoria. Therefore, non-cross-tabulated data is examined separately to determine the connection of this demographic information to housing need.

Table 6 provides a summary of household income, age of the head of household, household size, and tenure for the City of Astoria in 2000. The data is presented alongside State level data to compare regional and local trends.

Table 6: Household Income, Size, Age, & Tenure, State of Oregon & Astoria City (2000)

	STATE OF OREGON		CITY OF ASTORIA	
Income Cohort	Households (HH's)	% Share	HH's	% Share
<$15,000	201,824	15.1%	990	23.2%
$15,000-$24,999	179,053	13.4%	604	14.1%
$25,000-$34,999	185,595	13.9%	671	15.7%
$35,000-$49,999	236,282	17.7%	716	16.8%
$50,000-74,999	269,492	20.2%	831	19.5%
$75,000-$99,999	129,488	9.7%	237	5.6%
$100,000-$149,999	87,218	6.5%	137	3.2%
$150,000-$199,999	22,650	1.7%	40	0.9%
$200,000+	23,507	1.8%	43	1.0%
TOTAL	***1,335,109***	***100.0%***	***4,269***	***100.0%***

Household Size	HH's	% Share	HH's	% Share
1	347,718	26.1%	1,500	35.4%
2	479,777	36.0%	1,403	33.1%
3	205,850	15.4%	584	13.8%
4	173,939	13.0%	435	10.3%
5+	126,439	9.5%	320	7.5%
TOTAL	***1,333,723***	***100.0%***	***4,242***	***100.0%***
Age of HH Head	**HH's**	**% Share**	**HH's**	**% Share**
<25	82,316	6.2%	292	6.8%
25-34	223,484	16.7%	650	15.2%
35-44	283,485	21.2%	721	16.9%
45-54	286,656	21.5%	971	22.7%
55-64	178,952	13.4%	551	12.9%
65-74	137,294	10.3%	512	12.0%
75+	142,922	10.7%	572	13.4%
TOTAL	***1,335,109***	***100.1%***	***4,269***	***100.6%***
Tenure	**HH's**	**% Share**	**HH's**	**% Share**
Renter Households	856,890	64.2%	2,055	48.4%
Owner Households	476,833	35.8%	2,187	51.6%

SOURCE: US Census 2000 SF-3, P52, H16, & H7

2. HOUSEHOLD RESIDENCE TENURE SPLIT

Table 7 illustrates how households are broken out by tenure – i.e., whether a housing unit is owner-occupied or renter-occupied.

Table 7: Units in Structure by Tenure & Vacancy Status, Astoria, Oregon (2000)

Structure	Renter Occupied		Owner Occupied		Vacant Housing Units		Total
Type	Units	% Share	Units	% Share	Units	Rate	Units
Single-Family Detached	453	18.3%	2,026	81.7%	280	10.1%	2,759
Single-Family Attached & Duplex	469	88.0%	64	12.0%	85	13.8%	618
Multi Family (3+ Units)	1,110	95.6%	51	4.4%	244	17.4%	1,405
Manufactured Home	18	36.0%	32	64.0%	9	15.3%	59
Other (boat, RV, van, etc.)	5	26.3%	14	73.7%	0	0.0%	19
TOTAL	***2,055***	***48.4%***	***2,187***	***51.6%***	***618***	***100.0%***	***4,860***

SOURCE: U.S. Census 2000 SF-3, H32, & QT-H5

As shown in Table 7, in 2000 there were 4,860 housing units in the City of Astoria. Of these, 4,242 were occupied and 618 were vacant - a vacancy rate of 12.7%. Of the occupied

housing units, 2,055 were renter-occupied (48.4% of occupied units and 42.3% of all units) and 2,187 were owner-occupied (51.6% of occupied units and 45.0% of all units). With a substantially lower composition of owner households, tenure among occupied housing units in Astoria is relatively balanced when compared to the State as a whole.

Single-family detached housing units had the highest percentage of owner-occupancy. Single family attached units, duplexes, and multi-family units were all overwhelmingly occupied by renters and collectively comprised over 41% of all housing units. About 64 percent of manufactured homes were owner-occupied; however, manufactured homes comprised less than one percent of all housing units.

3. AGE & HOUSEHOLD RESIDENTIAL TENURE

Table 8 below summarizes housing tenure by the age of the head of the household. Results indicate the propensity for home ownership in Astoria is the least among younger households and generally increases with age, an unsurprising finding. As households age past 75, the homeownership percentage begins to decline again, rather abruptly.

Table 8: Age of Household Head by Tenure, Astoria Oregon (2000)

Age of Household Head	Owner Occupied		Renter Occupied		Total
	Units	Percent	Units	Percent	Units
Under 25	15	5.3%	270	94.7%	285
25-34	176	27.4%	466	72.6%	642
35-44	349	45.5%	418	54.5%	767
45-54	569	61.0%	364	39.0%	933
55-64	394	70.1%	168	29.9%	562
65-74	346	70.8%	143	29.2%	489
75+	324	58.2%	233	41.8%	557
Total	***2,173***	***51.3%***	***2,062***	***48.7%***	***4,235***

SOURCE: U.S. Census 2000 SF-1, H16

Among the youngest householder age group (15-24 years), nearly 95% of households were renters in 2000, as compared to 48% percent of all households in Astoria. Householders aged 25-34 were split between renters and homeowners at a roughly 3 to 1 ratio, respectively. Householders aged 35-44 were the closest an even split with a 45.5% homeownership rate. Homeownership rates in Astoria continued to climb through age cohorts, topping off at 70.8% for the 65-74 group, then declined abruptly to 58.2% for those aged greater than 75 years.

4. AGE & HOUSEHOLD INCOME FACTORS

Table 9 shows how income correlates with the age of the householder. The median household income in 2000 for Astoria was $33,011. As shown in Table 9 on the following page, over half of all households were in the bottom three income groups, earning less than $35,000 annually. Those earning between $35,000 and $99,999 comprised roughly 42% of

all households, while top tier income earners accounted for only 5% of household composition.

Table 9: Age of Household Head by Income, Astoria, Oregon (2000)

	Age Cohort							
Income Cohort	**<25**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**	**75+**	**Total**
<$15,000	9.80%	10.20%	13.03%	21.21%	9.49%	15.66%	20.61%	23.19%
$15,000-$24,999	12.09%	20.53%	12.42%	15.23%	8.11%	18.71%	12.91%	14.15%
$25,000-$34,999	4.32%	19.23%	21.01%	19.82%	11.18%	8.49%	15.95%	15.72%
$35,000-$49,999	9.36%	18.16%	23.88%	15.50%	10.89%	10.20%	12.01%	16.77%
$50,000-74,999	3.13%	17.33%	16.61%	30.93%	16.73%	6.62%	8.66%	19.47%
$75,000-$99,999	0.00%	5.06%	13.08%	43.46%	22.36%	13.08%	2.95%	5.55%
$100,000-$149,999	0.00%	3.65%	14.60%	24.09%	42.34%	8.76%	6.57%	3.21%
$150,000-$199,999	0.00%	12.50%	20.00%	45.00%	12.50%	10.00%	0.00%	0.94%
$200,000+	0.00%	0.00%	18.60%	32.56%	0.00%	27.91%	20.93%	1.01%
TOTAL	6.84%	15.23%	16.89%	22.75%	12.91%	11.99%	13.40%	100.00%

SOURCE: US Census 2000 SF-3

Households in the *under 25* age group and the *over 65* age groups had lower incomes than the population as a whole, with an even greater disproportionate share in households with very low incomes. A much lower percentage of households where the householder was in the 25 to 34 and 35 to 44 age group had very low or low incomes, compared to the City as a whole. A higher percentage of householders age 35 to 64 had very high incomes compared to the City of Astoria average.

Households beyond retirement age (65+ years) unsurprisingly had low income levels on average, with rates significantly higher that the City as a whole for the very low and low-income categories. However, it should be remembered that, relative to housing need, these households frequently are “cash poor and equity rich,” meaning that they have high home-ownership rates (see Table 8) and have frequently paid off their mortgages. Therefore, the reduced income that these post-retirement households have does not necessarily translate into housing affordability difficulties.

C. HOUSING DEMAND SUMMARY

This housing needs analysis is split into two components. The first of these is a short-term demand analysis, based primarily on recent demographic and market trends in the area. The second component evaluates longer-term trends through 2027. When dealing with small growth rates and populations, large percentage shifts in projected growth rates have relatively marginal impacts on the overall results.

The long-term analysis utilized the same assumptions about age of residents, with growth above and beyond the natural rate of growth assumed to have the same age distribution characteristics as assumed in the Portland State University model.

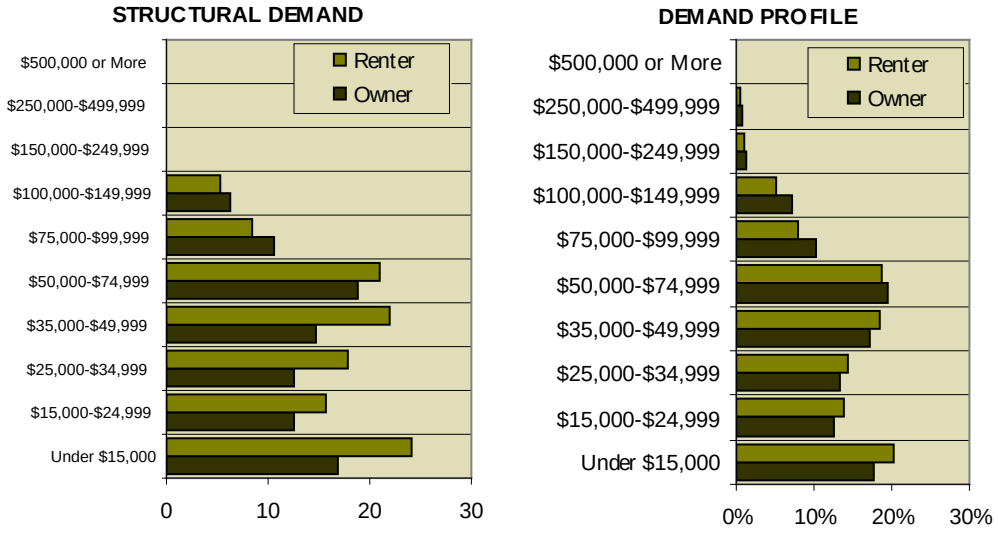
1. SHORT-TERM RESIDENTIAL DEMAND

The short-term residential demand analysis describes housing demand from 2007 to 2012 and has two components. The first component is a demographically-driven model, which is based on the current and projected age and income characteristics of households in the Astoria UGB. Data for the model was derived from Claritas, a third party data provider, and included a detailed age by income profile of the area for 2007 and 2012. A total of 11 income ranges and 11 age ranges are used, yielding 121 age-income cohort cells.

The age-income cohort data is converted to projected housing demand by tenure, using propensities by each age-income cohort to rent or own. The propensity data is combined with the current and projected age-income cohort distributions to generate a net increase in ownership and rental households within the Astoria UGB. Turnover housing demand, or likely home sales by existing residents to relocate elsewhere within the Astoria UGB, is then evaluated to produce a more accurate profile of total housing demand by income range. A turnover demand rate of 10% annually was assumed for ownership housing and a 25% rate for rental units. This step yields a net increase in demand for units, as well as an anticipated profile of demand by household income range.

Table 10: Projected Short-Term Residential Demand, Astoria UGB, (2007-2012)

	Structural Demand		Demand Profile	
Household Income	**Owner**	**Renter**	**Owner**	**Renter**
Under $15,000	17	24	17.8%	20.3%
$15,000-$24,999	13	16	12.5%	13.7%
$25,000-$34,999	13	18	13.2%	14.2%
$35,000-$49,999	15	22	17.3%	18.4%
$50,000-$74,999	19	21	19.5%	18.8%
$75,000-$99,999	11	8	10.1%	8.0%
$100,000-$149,999	6	5	7.2%	5.0%
$150,000-$249,999	0	0	1.3%	0.9%
$250,000-$499,999	0	0	0.7%	0.4%
$500,000 or More	0	0	0.3%	0.1%
TOTAL	***92***	***114***	***100.0%***	***100.0%***



SOURCE: Johnson Gardner

The demand by tenure and income was further segmented by structure type in this model. The model evaluated observed housing production by type and within the Astoria area, and converted demand by income and tenure into demand by housing product type on the basis of recent trends.

The short-term housing production model assumed no dramatic change in market inputs that would substantially impact the development environment.

The short-term model was used for a five-year period. The net change in households by cohort group is converted to structural demand for both owner and rental housing units using a matrix of propensities to own and rent by cohort. In addition to producing an analysis of structural demand, the model also forecasts a demand profile. This profile represents the anticipated profile of overall demand, including turnover demand. Table 10 summarizes demand numbers through 2012.

2. LONG-TERM RESIDENTIAL DEMAND

The long-term residential demand forecast assumes the long-term growth pattern adopted in the Clatsop County Comprehensive Plan, and assumes that the City of Astoria seeks to actively accommodate all projected residential demand over the forecast period. A total of 1,004 dwelling units are projected to be demanded within Astoria through 2027. The demand numbers reflect an assumed structural vacancy rate of 5% for residential units within the UGB. This is considerably below the 2000 Census average rate for the City of Astoria of almost 13% (618 vacant units out of a total of 5,019), but better reflects what would be expected with marginal growth in the future and given recent commercial growth locally.

As noted previously, several trends are expected to occur in Astoria and other Oregon communities in the coming decades in terms of the type of housing built, consistent with demographic trends related to age, income and household size (see Page 3). In general these trends will include the following:

- Increasing percentage of townhomes and rowhouses (single-family attached housing) to accommodate older and smaller households.
- Increasing percentage of duplexes and multifamily units to accommodate the fact that incomes are not rising as fast as land and housing prices.
- Increasing percentage of single-family homes built on smaller lots, resulting in an increase in the average density of single-family detached housing.

The projected distribution of housing by type is summarized in Table 11, in comparison to today's distribution. The distribution of new homes is shown in Table 12 (excluding second homes).

Table 11: Distribution of Housing by Structure Type, Astoria, 2000, 2027

Unit Type	Housing Units			
	2000		2006-2027	
	Number	Percent	Number	Percent
1 Unit Detached	2,759	57%	502	50%
1 Unit Attached and Duplexes	618	13%	181	18%
Multi-family (3+ units)	1,405	29%	311	31%
Manufactured Home	59	1%	12	1%
Other (boat, RV, van, etc.)	19	0%	4	0%
Total Units	***4,860***		1,004	

SOURCE: US Census and Cogan Owens Cogan, LLC
NOTE: "1-Unit Attached" is the US Census term for rowhouses and townhouses

Table 12: Projected Long-Term Residential Demand, Primary Homes, Astoria UGB (2007-2027)

Year	Product Type				
	Single Family Detached	Single-Family Attached & Duplex	Multi-Family	Manufactured	Total
2007-2012	106	38	66	3	213
2012-2017	129	47	80	3	258
2017-2022	128	46	80	3	256
2022-2027	138	50	86	3	276
Total	**501**	**181**	**312**	**12**	**1,004**

SOURCE: Cogan Owens Cogan, LLC and Johnson Gardner

Through 2027, the demand model anticipates net new demand for 1,004 housing units within the City of Astoria's urban area. For permanent resident households, Single-family dwelling units are expected to account for about 50% of demand in coming years, given the trends identified above. These changes in future demand will result in only modest change in the overall mix of housing units for the City as a whole. For example, single family detached units will continue to make up over 55% of the total for all units (compared to 57% today).

3. SECOND HOME DEMAND

Growth in tourism and the second home market in Astoria will influence the need for housing in Astoria in even more greatly than increases in the resident population. In recent years, Astoria has become a more popular tourism destination, in part due to Lewis & Clark National Park Designation and Bicentennial events. For example, Oregon Tourism Commission data indicates that annual tourism spending was up 10.4% between 2000 and 2004 and 89% between 1991 and 2004. Other factors affecting second home demand included construction of the 17th Street Pier and resulting tour boat traffic in the late 1990s, media coverage of Astoria (e.g., Good Morning America's feature on Astoria as the #1 City in the country to retire to) exposure from movies shot on location in Astoria.

Table 13: Composition of Seasonal Housing Units, Oregon, North Coast, and Astoria (2000)

Statistic	State of Oregon	North Coast 1/	City of Astoria
TOTAL HOUSING UNITS	**1,452,709**	**62,480**	**4,858**
Occupied Housing Units	1,333,723	44,199	4,235
Vacant Housing Units	118,986	18,281	623
Housing Vacancy Rate	8.2%	29.3%	12.8%
SRO 2/ Housing Units	36,850	12,825	90
SRO as a % of Vacant Units	*31.0%*	*70.2%*	*14.4%*
SRO as a % of Total Units	*2.5%*	*20.5%*	*1.9%*

1/ Clatsop, Tillamook, and Lincoln Counties
2/ Seasonal, Recreational, Occasional
SOURCE: U.S. Census SF-1 QT-H1

Despite these trends, the City of Astoria has not yet witnessed the level of second home growth of other communities on the North Oregon Coast (e.g., Manzanita and Cannon Beach). In fact, in 2000 only 90 homes in Astoria were classified as Seasonal, recreational, or Occasional Use. This measure represented only 1.9% of all housing units, well below the North Coast average of 20.5% and even below the State average of 2.5%. More recent data indicates that the percentage of second homes has increased to 3.4% of all homes in the Astoria area (in 2007), higher than the State average but still well below the average for the North Coast. The number of second homes increased between 2000 and 2006 by about 95 housing units, or just over 15 units per year on average. Interviews with area realtors and studies of national trends in the second home market indicate the following:

- Within the Astoria-Warrenton market area, the majority of home sales in the last three years have been to second home owners. (*Note: sales should be distinguished from construction*.)
- Buyers are generally from out of town and often shop online. They want properties with a river view and where they can walk to town. Condos and historic downtown properties are most popular. A majority of second home construction in Astoria appears to be in condominium units either as townhouses or in multi-family structures.
- Many buyers are renting out their homes with consideration for retiring to the area some day.

- Within Astoria, significant waterfront development has occurred in recent years such as the Mill Pond residential project.

Over the next 20 years, the second home market in Astoria is expected to continue to expand. The share of second homes is projected to grow as a proportion of the total supply of housing. The percentage of second homes is expected to increase as a percentage of all homes in a roughly linear fashion, climbing by about 2.4% of the total every five years with second homes accounting for about 13% of all homes in 2027 (see Figures 1 and 2). On average, this is relatively similar to but somewhat higher than what has occurred during the last five to seven years.

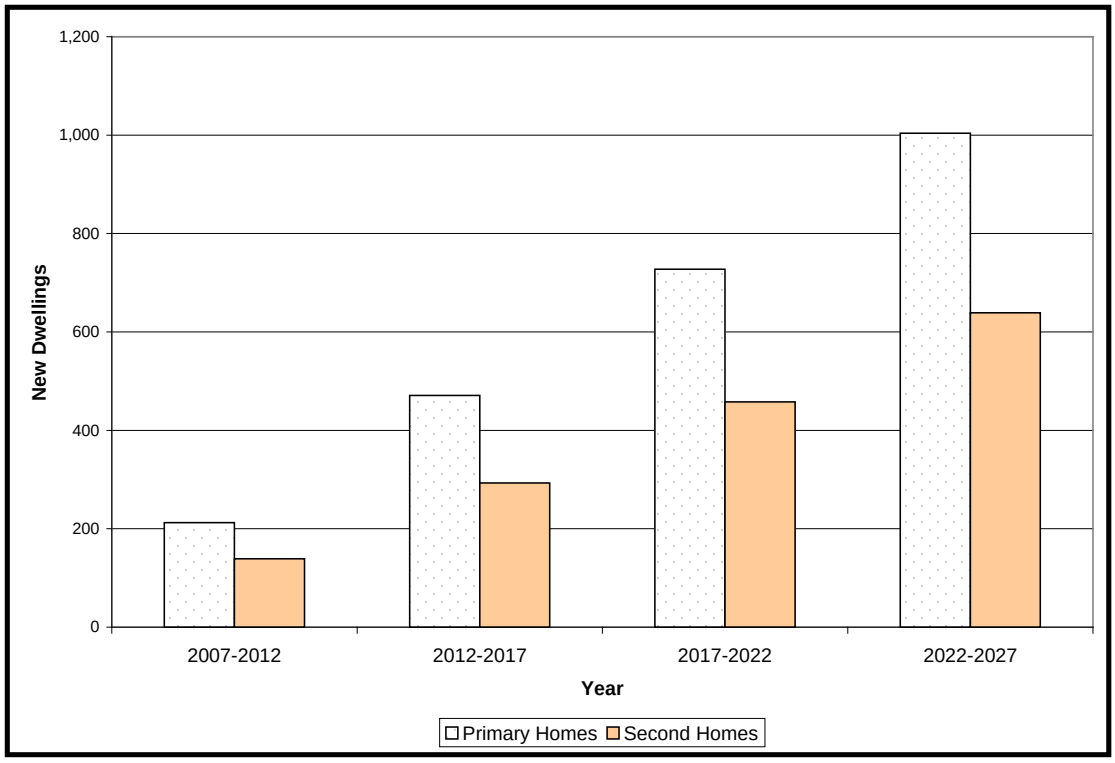
This would be equivalent to construction of about 30-35 new second homes per year for a total of about 640 new second homes between now and 2027. This increase, coupled with the relatively low population growth rates projected for Astoria translates into new second homes accounting for 40% of all new homes in the area over the next 20 years. It would represent a 250% increase in the total supply of second homes, compared to today's supply. This compares to a 19% increase in the supply of permanently occupied homes and a 30% increase in all homes during the same period.

Table 14: Projected Long-Term Second Home Demand, Astoria UGB (2007-2027)

	Product Type				
Year	Single Family Detached	Single-Family Attached & Duplex	Multi-Family	Manufactured	Total
2007-2012	46	64	24	6	139
2012-2017	51	71	26	6	154
2017-2022	54	76	28	7	165
2022-2027	60	83	31	7	181
Total	**211**	**294**	**109**	**26**	**639**

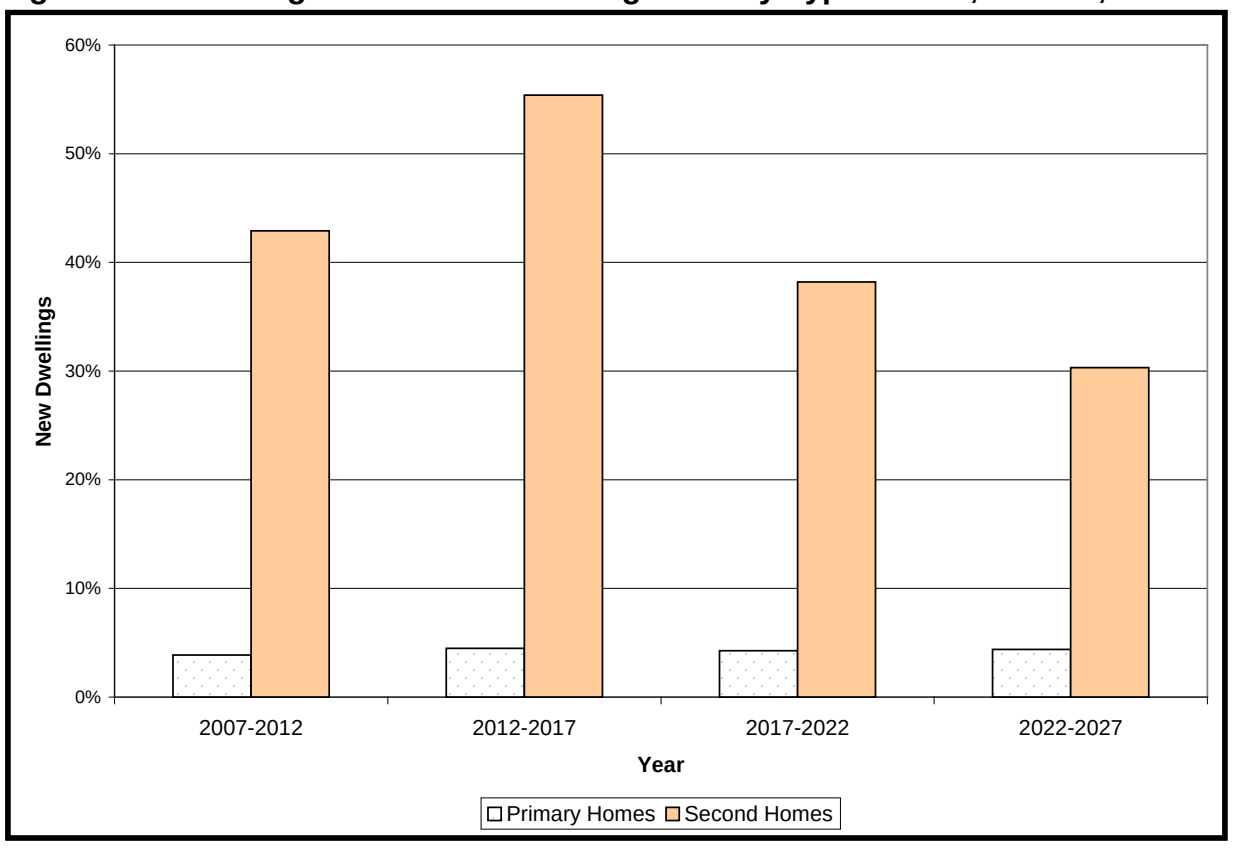
SOURCE: Cogan Owens Cogan, LLC

Figure 1. Increase in Dwelling Units, Astoria, 2007-2027



SOURCE: Cogan Owens Cogan, LLC

Figure 2. Percentage Increase in Dwelling Units by Type of Unit, Astoria, 2007-2027



SOURCE: Cogan Owens Cogan, LLC

D. FUTURE LAND NEEDS

Residential land needs for future housing are a combination of land needed for primary dwelling and second homes and a function of both the number of housing units projected and the density of housing built. Densities vary by housing type, with lower relative densities for single-family detached housing and increasingly higher densities for single-family attached housing, duplexes and multi-family units. Densities for manufactured housing in parks are typically higher than for single-family detached housing but lower than multi-family housing.

1. PROJECTED DEVELOPMENT DENSITIES

Densities are affected by zoning regulations (allowable minimum lot sizes) and the market for certain sized lots in terms of both people's desires and the cost of land. For the purposes of this analysis, average densities are based on the density of recent development, coupled with some of the trends described earlier in terms of increasing land and housing costs, limited increases in household income and relatively higher demands for housing on smaller lots. Densities are considered as net densities (i.e., the density of development not including land needed for roads or other public facilities). Land needed for roads, infrastructure and other non-residential uses in residential areas will be subtracted from land supply to compare land needs and supply later in this report. Projected average densities are summarized in Table 15 (measured in dwelling units per acre). Single-family detached housing densities are somewhat lower than allowed and recent average densities to account for the fact that much of the remaining residential land available and appropriate for this type of housing is on land with moderately steep slopes, particularly the larger parcels.

Table 15: Development Densities by Structure Type (units per acre), Astoria, 2000, 2027

Unit Type	Allowed Density	Recent Average Densities	Projected Average Densities
1 Unit Detached	8.0	8.0	5.0
1 Unit Attached and Duplexes	16.0	20-30	8.0
Multi-family (3+ units)	26.0	30+	16.0
Manufactured Home		NA	7.5

SOURCE: City of Astoria and Cogan Owens Cogan, LLC

NOTE: Allowed densities are average which correspond to the City's R1, R2 and R3 zones

2. PROJECTED LAND NEED BY HOUSING TYPE

Projected land needs for year-round and seasonal housing are summarized in Table 16, assuming the number of projected housing units and residential densities summarized previously. A total of 236 acres of land is needed to meet needs for year-round residents and seasonal homes over the next 20 years. The bulk of this land is needed for single-family residential housing, given that the average density of this type of development is lower and it accounts for about 45% of all units.

Table 16. Net Land Need by Dwelling Type, Astoria, 2007-2027

Residential Land Need	Residential Mix		Additional Dwelling Units		DU/Acre	Acreage Needed		
Housing Type	Resident	Second Home	Resident	Second Home		Resident	Second Home	Total
Single Family								
Conventional	50%	33%	502	211	5.00	100.4	42.2	142.6
Attached	16%	45%	161	288	8.00	20.1	36.0	56.1
Multi-Family								
Medium Density	22%	13%	221	84	12.00	18.4	7.0	25.4
High Density	10%	4%	100	29	22.00	4.6	1.3	5.9
Manufactured Homes								
Parks	1%	2%	10	14	8.80	1.1	1.6	2.7
Subdivisions	1%	2%	10	14	6.50	1.5	2.2	3.7
TOTAL	100%	100%	1,004	639	5.05	146.1	90.3	236.4

SOURCE: Cogan Owens Cogan, LLC
DU = Dwelling Unit

3. PROJECTED LAND NEED BY ZONING DESIGNATION

In addition to identifying overall residential land needs, Oregon Administrative Rules and the *Planning for Residential Growth* workbook require cities to assess the need for land in specific zoning designations to ensure that enough land is zoned appropriately to meet future needs. The City has several residential zoning designations, including the R1, R2 and R3 zones. In addition, residential uses are allowed outright or under certain conditions in several other zones, including the C3, C4, GI, A2, A2A, A3 and S2(A) zones. The following table summarizes residential uses allowed in these zones. In most non-residential zones, housing is allowed only as a conditional use and as part of a mixed use building or development.

Table 17. Allowed Residential Uses by Zoning Designation, Astoria

Zone	Permitted Outright	Conditional Use
R1	SF	ADU
R2	SF, D, ADU	MDP, MF
R3	SF, D, ADU, MF	MDP
C3	ED, MF, MUB	
C4	ED, MUD	MF
GI		MUB/MF
A2		MUT
A2A		MUT
A3		SF, MF
S2(A)		MDP, MF, MUB

ADU = Accessory dwelling unit
D = Duplex
ED = Existing dwelling
MDP = Manufactured dwelling park
MF = Multi-family unit
MUB = Mixed-use building
MUT = Mixed-use that includes tourist-oriented uses
SF = Single family detached dwelling units (including manufactured dwellings on single lots)

Given the allowed uses in each zoning designation and average densities prescribed in the City's zoning ordinance for the R1, R2 and R3 zones (8.0, 16.0 and 26.0 dwelling units per acre, respectively), the bulk of single-family detached housing units are expected to be located in the R1 zone, while most duplexes, single-family attached and multi-family units are expected to be located in the R2 and R3 zones. Some of the City's future mixed use and multi-family housing also may be located in the non-residential zones identified in Table 17 above. This will be discussed separately as an optional way to expand the supply of available residential land, rather than accounted for in a base set of projections (see page 15). Table 18 summarizes the percentage of each type of housing projected to be located in each residential zone.

Table 18. Distribution of Future Residential Uses by Zoning Designation, Astoria

Type of Use	R1	R2	R3	AH/MP
Single-family conventional (detached)	75%	10%	10%	5%
Single-family attached and duplexes	0%	50%	50%	0%
Multi-family (3+ units)	0%	14%	53%	33%
Manufactured homes (on individual lots)	50%	25%	25%	0%
Manufactured homes (in parks)	0%	50%	50%	0%

SOURCE: Cogan Owens Cogan, LLC

The land need data in Table 16 coupled with the projected distribution in Table 18 have been used to estimate the amount of land needed in each residential zoning designation summarized in Table 19.

Table 19. Net Land Need by Zoning Designation

	R1	R2	R3	AH/MP
Land Need (acres)	115.4	51.2	67.0	2.7

SOURCE: Cogan Owens Cogan, LLC

4. COMPARISON OF NEED AND SUPPLY

Results of an updated buildable lands inventory are summarized in a separate report. That inventory identifies the supply of buildable land within the Astoria UGB, including land that is completely vacant, partially vacant and redevelopable summarized in Table 20. Land needed for non-residential uses already has been subtracted from this inventory of net residential land. This includes land needed for roads, utilities, parks, schools, churches and other non-residential uses. A standard guideline for the amount of residential land needed for non-residential uses is 25% of the total supply. We have used this rule-of-thumb to estimate the net supply of buildable land shown in Table 20 and the accompanying buildable lands inventory report. We have also deducted land associated with landslide hazard areas that are not also on steeply sloped land. It is important to note that we have deducted these areas only for purposes of calculating the potential supply of land consistent with State guidelines. This does not mean that development or its density is prohibited or restricted in these areas, except to the extent that the City's Development Code includes such provisions.

Table 20. Net Buildable Acres by Land Use and Zone, Astoria UGB

Land Use	Zone	Parcels	Acres
Commercial	C1	2	0.14
	C2	5	1.85
	C3	51	12.38
	C4	1	0.13
	LS	3	0.39
	AH-MP	3	2.52
	Total	*65*	*17.40*
Industrial	GI	3	2.03
Residential	R1	160	25.20
	R2	285	74.99
	R3	205	119.18
	AH-MP	43	1.49
	Total	*693*	*220.86*
Institutional/ Other	A2	1	0.39
	S1	9	5.23
	S2	12	6.38
	IN	3	4.69
	HR	2	0.71
	Total	*27*	*37.40*
Total		***801***	***277.67***

SOURCE: The Benkendorf Associates Corp.,Cogan Owens Cogan, LLC, and Wingard Planning and Development Services

The following table compares the land need identified in Table 19 with the supply shown in Table 20. The results indicate an overall deficit of 15.54 acres of land. It also shows a deficit for land in the R1 designation and a surplus in the R2 and R3 designations. It also should be noted that a significant portion of the supply of land in the R3 zone is in the area surrounding and to the east of the Emerald Heights subdivision. Potential use of this land to meet housing needs is affected by a variety of factors including the following:

- Potential access issues. The area currently is served by only a single road. Topography will make construction of additional roads challenging.
- Topography. Much of the area is sloped, although land with slopes of 25% or more has already been subtracted from the buildable lands inventory and a conservative estimate of average density has been used to account for these conditions to some degree.
- Limited number of owners. The Emerald Heights area is under a single ownership as is a large parcel in the inventory to the east. This could represent an opportunity or constraint to future development, depending on the desires of the property owners.

Table 21. Estimated Net Land Surplus/(Deficit) by Zoning Designation, Astoria UGB, 2027

Type of Use	R1	R2	R3	AH-MP	Total
Land Need	115.4	51.2	67.0	2.7	236.4
Land Supply	25.20	74.99	119.18	1.49	220.86
Surplus/(Deficit)	(90.20)	23.79	52.18	(1.21)	(15.54)

SOURCE: Cogan Owens Cogan, LLC and Wingard Planning and Development Services

E. OPTIONS FOR ADDRESSING FUTURE NEEDS

As noted above, the updated analysis shows an overall deficit of about 15.54 acres of land based on the assumptions and calculations described earlier in this report. The City will need to address the imbalance in zoning for the supply of vacant land by rezoning certain areas from R2 or R3 to R1 or by assuming a larger relative percentage of single-family detached housing development in the R-2 and R-3 zones.

The City may consider a variety of approaches to further increase the overall density and/or efficiency of housing development and reduce the overall future need for residential land. Such strategies could include the following:

- **Assume higher densities and/or increase allowable densities**. Assuming higher densities, particularly for single-family detached housing, will reduce the overall land need for residential development. This report assumes relatively conservative (low) densities compared to allowable and recent densities in part to address constraints represented by steep slopes. However, clustering of development and other techniques could be used to increase densities. A modest increase in assumed densities would have a relatively significant impact on resulting land needs. For example, increasing the assumed average density of single-family detached residential development from 5 to 8 units per acre would reduce future land needs by about 50 net acres. Assuming an increase of 5 to 6.5 net dwelling units per acre would reduce land needs by about 32 net acres. Assuming a density of 12 units per acre for single family attached housing (instead of 8 units per acre) would reduce land needs by another 19 net acres.
- **Using non-residential land for a mix of residential and non-residential uses**. The City currently allows for development of mixed use buildings in several non-residential zones as noted on Page 16. Several mixed use developments have been built in the last several years and several more are currently proposed in commercial and other non-residential areas. These properties could meet a portion of the future need for single-family attached and multi-family units. Potentially vacant or redevelopable properties in these areas represent about 30 net acres of land. If approximately one-third of this area were developed for mixed use, it would represent about 10 net acres of the residential land need.
- **Assume a lower percentage and number of future second homes**. Assuming fewer future second homes also will result in a lower overall residential land need. For example, assuming a decrease in the percentage of second homes in 2027 from 13% to 11% of the total supply of housing units would reduce the future land need by 18 net acres. This would be equivalent to construction of 513 new second homes by 2027.
- **Rezoning land from non-residential to residential use**. The City does not have a large surplus of land zoned for employment use according to the inventory and the estimated future need for employment land. Therefore, re-zoning some of this land for residential use likely is not an option to meet residential land needs. However, rezoning some land currently zoned for institutional uses could help meet a portion of the residential land need. For example both the City and County public works facilities could potentially be relocated and the existing sites could be developed for a mix of residential and commercial use. The County has considered moving its public works facilities to a site outside the Astoria UGB in the past. The City could consider moving its operations onto

another parcel of land already zoned for institutional uses (e.g., the existing landfill). Together, these two sites make up approximately 11 net acres of land.

- **Allowing additional accessory dwelling units**. The City currently allows for accessory dwelling units (small housing units on existing developed lots). Easing restrictions on accessory dwelling units and assuming a certain amount of development of these units would reduce future residential land needs. For example, if accessory units accounted for about 2% of future permanent housing units, the residential land need would drop by approximately 5 net acres.
- **Assume more intensive development/redevelopment of Emerald Heights**. The developed portion of Emerald Heights currently is at a gross density of approximately 5.7 units per acre and a net density of about 7.7 units. That is a relatively low density for the type of housing in that development. More intensive development or redevelopment of that site could reduce future land needs. For example, if the net density increased to approximately 12 units per acres (assuming a mix of single family attached and detached housing, duplexes and multi-family housing), future land needs would decrease by about 13 net acres.

The impact of these options on potential future residential land need is summarized in the table below.

Table 22. Estimated Impact of Zoning and Development Strategies, Astoria UGB, 2027

Strategy	Assumptions	Change in Land Need
Assume higher density for future residential development – Option A	• Single family detached housing at net density of 6.5 units per acre • Single-family attached at net density of 12 units per acre	72
Assume higher density for future residential development – Option B	• Single family detached housing at net density of 8 units per acre • Single-family attached at net density of 12 units per acre	51
Continue to develop non-residential land for mixed use	• One-third of developable land zoned A-2, A-3 and S-2 land is developed for mixed residential/commercial use	10
Assume lower level of second home development	• Reduce percentage of second homes to 11% of total in 2027 (vs. 13%) • Equivalent to 513 new second homes built during next 20 years	18
Rezone land from non-residential to residential use	• Relocation of City and/or County public works facilities to institutional sites within City or alternative sites outside City (for county facility) • Existing properties rezoned or commercial, residential or mixed use	11
Allow for additional accessory dwelling units	• Two percent of all new units developed as accessory units	5
Redevelop portions of Emerald Heights	• Net density of developed areas increases from 7.7 to 12 units per acre	13

SOURCE: Cogan Owens Cogan, LLC