

Whatcom County Comprehensive Plan

Population and Employment: Growth Projections and Preliminary Allocations

Technical Report

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Introduction

The Whatcom County Department of Planning and Development Services, in coordination with the cities in Whatcom County, is engaged in a multi-year project to update the Whatcom County Comprehensive Plan and conduct an urban growth area (UGA) review by 2025, as required by the Washington State Growth Management Act (GMA). An initial step in this process is to develop a reasonable set of projections of future growth in population and economic activity and allocations of where this growth will occur. These projections and allocations of growth are foundational inputs that will inform many aspects of the comprehensive planning process over the next few years.

Projections and allocations of population and employment will be developed using a two-step process. The first step is to develop technical projections and allocations based on existing forecasts, historical trends, and additional data analysis. The second step is to make adjustments to the technical allocations based on local plans, special circumstances, and other policy considerations. This technical memo addresses the first step in the process – to establish 20-year technical projections of population and employment and then distribute this growth to UGAs and areas outside UGAs.

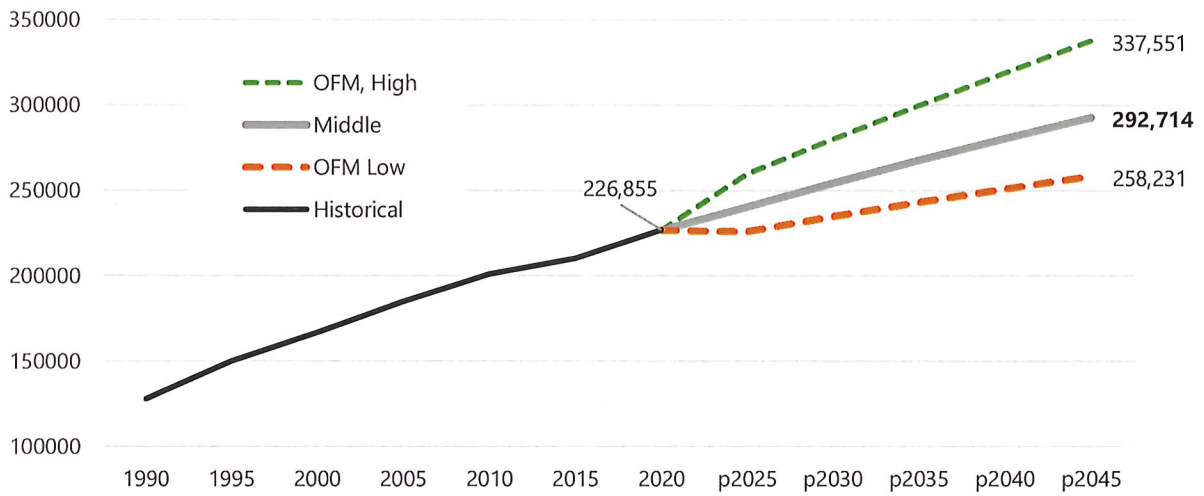
Using these technical projections as a starting point, city and County representatives will then collaborate to make policy-based adjustments to the technical projections and allocations of growth. It is anticipated that final projections and allocations of growth will be adopted by the Whatcom County Council and city councils in 2025. The specific elements documented in this technical memo include the following:

- Countywide projections of population and employment.
- Allocations of population and employment to UGAs and lands outside of UGAs.
- Trend analysis of Whatcom County age cohorts

Countywide Population

The Washington Office of Financial Management (OFM) updates County and state long-range population forecasts every five years to support Growth Management Act planning. The most recent forecasts out to 2050 were issued in 2022 and are shown in Figure 1. OFM considers the middle projection the most likely because it is based on assumptions that have been validated with past and current information. The high and low projections represent the range of uncertainty that should be considered when using these projections for planning purposes.

Figure 1: Whatcom County Population, 1990-2045



Source: Office of Financial Management (OFM) historical data and projections from 2022

The middle and low projections issued in 2022 both represent increases over OFM's 2012 forecasts. The 2012-issued low forecast for 2040 was increased by 9% in the 2022 series forecast and the middle series was raised by 7%. The 2012 forecasts had been conservative on those two scenarios in part because the nation and region had yet to show convincing signs of recovery from the Great Recession, so it was unclear when a recovery would occur and how fully growth would resume once it did.

The high projection, on the other hand, was kept rather aggressive in the 2012 forecasts – partly in recognition of the impressive rates of growth that had immediately preceded the recession. By the time of the 2022 series forecast, it was clear that those high scenario growth rates were unlikely to resume and the 2040 high scenario projection was reduced by 9% to be more realistic – shifting from a 2040 population of 350,000 in the 2012 high forecast to 319,000 in the 2022 high forecast.

OFM Historical and Projected Population Growth

Population growth is driven by three components of change: births, deaths, and migration. The difference of births minus deaths is considered the natural component of change (or natural increase), and net migration (the difference in in-migration and out-migration) is considered the migration component of change. Exhibit 2 shows that in both Whatcom County and Washington State, the net migration component has been and is expected to be larger than the natural component of population increase.

Whatcom County has historically had a larger percentage of its population growth come from net migration than the State. That gap was largest in the early 2000s, when 80% of Whatcom County's growth was due to migration, versus just 52% of statewide growth. The gap narrowed during the Great Recession. From 2010 to 2015, the County attributed just 57% of its growth to migration, almost as low as the 52% recorded statewide.

Figure 2: Components of Population Change, 1990-2045

		Whatcom County				Washington State			
		Net Migration	Natural Increase	Total Population Growth	Percent Migration	Net Migration	Natural Increase	Total Population Growth	Percent Migration
Estimates	1990-95	17,819	4,343	22,162	80%	327,599	202,307	529,906	62%
	1995-00	12,858	4,026	16,884	76%	316,328	181,246	497,574	64%
	2000-05	14,475	3,665	18,140	80%	227,948	176,706	404,654	56%
	2005-10	11,975	4,199	16,174	74%	222,185	203,558	425,743	52%
	2010-15	5,117	3,859	8,976	57%	198,862	183,587	382,449	52%
	2015-20	14,445	2,286	16,731	86%	444,774	154,547	599,321	74%
OFM Forecast (Mid)	2020-25	11,768	1,706	13,474	87%	300,650	93,424	394,074	76%
	2025-30	11,042	2,795	13,837	80%	277,685	124,695	402,380	69%
	2030-35	12,415	889	13,304	93%	293,530	88,218	381,748	77%
	2035-40	13,408	-595	12,813	105%	303,364	60,597	363,961	83%
	2040-45	13,558	-1,119	12,439	109%	306,500	43,624	350,124	88%
<i>10-yr Trend</i>	2010-20	9,781	3,073	12,854	76%	321,818	169,067	490,885	66%
<i>20-yr Trend</i>	2000-20	11,503	3,502	15,005	77%	273,442	179,600	453,042	60%
<i>30-yr Trend</i>	1990-20	12,782	3,730	16,511	77%	289,616	183,659	473,275	61%

Source: OFM - Forecasting & Research, December 2022

Note: The percentage of total growth from migration exceeds 100% from 2035 to 2045 because natural increase is negative

The OFM forecasts assume a gradually decreasing natural component of population growth largely due to growth in elderly population, a trend explored further in the Age Cohort Analysis section of this report. The migration component of population change tends to be more volatile than the natural increase component. Major economic, social, or policy changes can generate spurts or slowdowns in migration that are difficult to predict. The Office of Financial Management cites uncertainty about the pace of economic recovery and possible changes in U.S. immigration policy as factors that could affect migration trends in the future.

The 2022 OFM forecasts do not attempt to predict the timing or magnitude of major long-term migration shifts but OFM demographers do track migration closely for future forecast updates. From 2015 to 2020, as the Pacific Northwest was booming and attracting migrants from across the U.S. and abroad, migration had rebounded to account for 86% of Whatcom growth and 74% of statewide growth.

Informed in part by this components-of-change analysis, OFM produces the three future growth scenarios (low, middle, high) depicted in Figure 1 and summarized below along with average annual growth totals and average annual percentage rates of growth.

Historical and Projected Population Growth Rates

Figure 3: Historical and Projected Population Growth Rates, 1990-2045

	Whatcom County			Washington State	
	Population	Avg. Annual Growth	Avg. Annual Rate	Population	Avg. Annual Rate
Historical	1995	149,950		5,397,039	
	2000	166,834	3,377	5,894,613	1.8%
	2005	184,974	3,628	6,299,267	1.3%
	2010	201,148	3,235	6,725,010	1.3%
	2015	210,124	1,795	7,107,459	1.1%
	2020	226,855	3,346	7,706,780	1.6%
OFM Forecast (Low)					
	2025	225,902	-191	7,530,451	-0.5%
	2030	234,679	1,755	7,765,833	0.6%
	2035	242,954	1,655	7,982,666	0.6%
	2040	250,769	1,563	8,183,532	0.5%
	2045	258,231	1,492	8,371,969	0.5%
OFM Forecast (Middle)					
	2025	240,321	2,693	8,100,854	1.0%
	2030	254,158	2,767	8,503,234	1.0%
	2035	267,462	2,661	8,884,982	0.9%
	2040	280,275	2,563	9,248,943	0.8%
	2045	292,714	2,488	9,599,067	0.7%
OFM Forecast (High)					
	2025	259,547	6,538	8,748,039	2.6%
	2030	279,846	4,060	9,406,820	1.5%
	2035	299,569	3,945	10,043,320	1.3%
	2040	318,762	3,839	10,660,617	1.2%
	2045	337,551	3,758	11,262,964	1.1%

Source: OFM - Forecasting & Research, December 2022

- From 1995 to 2010, the Whatcom County population grew at a faster rate than the state of Washington as a whole. After 2010, however, statewide population growth has been slightly higher on an average annual percentage basis. From 2015 to 2020, the state grew at 1.6% per year, versus 1.5% for Whatcom County.
- Looking forward, the OFM population projections – in each of the low, middle, and high scenarios – assume that Whatcom County will return to a slightly faster annual growth rate versus the statewide average, with that gap between state and County held steady at one to two tenths of a percent.
- By 2045, the horizon year for the Comprehensive Plan update, Whatcom County’s population is anticipated to reach 292,714 in the middle scenario. The low and high scenarios for 2045 range from 258,231 to 337,551, respectively.

- After 2025, growth statewide and in Whatcom County is projected to gradually decline in both percentage rate and in absolute annual additions. This slow deceleration is largely due to declining birth rates and rising death rates. Differences in assumed annual net in-migration account for most of the difference between low, mid, and high scenarios.
- Although almost 10% more ambitious than the 2012 set of OFM low projections, the latest low scenario forecast for Whatcom County remains quite conservative. The fastest future growth period (2025-2030) is projected to grow at a rate of 0.77%, lower than any 5-year period in Whatcom's modern history. The lowest prior recorded average growth rate over five years was from 2010 to 2015, following the Great Recession, when growth managed just 0.88% annually. In fact, even the middle forecast series averages just 1.0% annually overall through 2045, well below the 1.7% pace for the comparable historical timeframe.

Comprehensive Plan Population Growth Alternatives

OFM demographers are generally thorough and consistent in their forecasting of population at the state and county levels, relying on widely accepted age cohort, fertility, and death rate data as inputs to a components-of-change model that then factors in migration tendencies based largely on broad economic and employment flows. The OFM middle projection is considered the most likely future and can safely be treated as a baseline assumption for the trajectory of Countywide growth for the present Comprehensive Plan update work underway in the County.

The OFM low and high projections generally represent well-reasoned attempts to capture the range of possible growth scenarios that may result in slower or faster population increase than baseline projections. Following the precedent used in the 2016 Whatcom County forecast work, we have determined that the OFM high-low range may represent outcomes that are both unlikely and too divergent for practical planning purposes. We have accordingly made minor adjustments to effectively tighten the forecast range. Figure 4 shows these alternative projections and how they compare to the OFM projections developed in 2022.

The alternatives were developed using the following rationale:

- **Middle projection.** No adjustments were made to the OFM middle projection, which is considered the most likely future. The OFM middle projection forecasts a slower annual growth rate between 2023-2045 (1.0%) than was experienced over the past 25 years (1.7% annually between 1995-2020). That slowdown is a reflection of steadily dropping fertility rates, rising death rates, and uncertain net migration.
- **Low projection.** The OFM low projection assumes growth rates much lower than historical averages. Over the past 30 years, there has not been a five-year period with an average annual growth rate as low as the 0.4% annual rate OFM is projecting between 2023 and 2045. In the early-mid 1980s, five-year annual average growth rates slipped to 1.2%, and most recently the annual average growth rate between 2010 and 2015 was 0.8% during that post-recession period.

The proposed alternative low projection results in a 2045 population of about 274,000. It is based on an assumption that migration will be 30% less than under the middle projection, and the natural component is the same as the middle projection. The unadjusted OFM low scenario resulted in total absolute growth that was 61% lower than the middle scenario. In contrast, after adjustment, the low scenario yields total horizon period growth that is just 33% lower than the OFM middle.

- **High projection.** The OFM high projection assumes an annual growth rate (1.7%) that is somewhat higher than the 2010-2020 growth rate (1.2%) the County has experienced most recently, and yields a 2045 population of about 338,000. The alternative high projection results in a 2045 population of about 322,000. It is based on an assumption that the annual migration component will be approximately 50% higher than under the middle projection, and the natural increase component is the same as in the middle projection. After adjustment, the reduced high scenario results in absolute growth that is 51% above the middle scenario total growth, compared to the unadjusted OFM high growth total that was 79% higher than the middle scenario.

The smaller magnitude of adjustment used for the high projection versus the low reflects an intentional decision, based on the idea of preserving more of a conservative approach to infrastructure planning – helping to avoid a scenario where infrastructure expansion fails to keep pace with higher-than-expected growth (or even constrains growth despite strong demand).

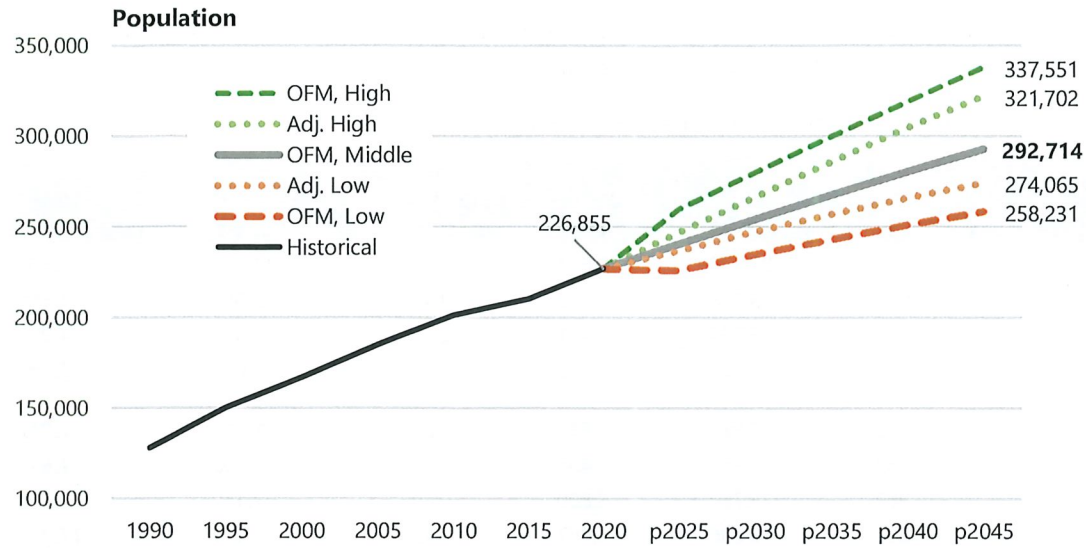
The table below shows growth figures, both adjusted and unadjusted, for the specific starting and horizon years used in the plan update (2023 to 2045). The chart following the table uses even 5-year breaks to illustrate the differences in trajectory for the adjusted low and high scenarios relative to the original OFM projections.

Figure 4: Population Forecast Ranges, OFM vs. Adjusted, 2023-2045

	Projected						
	2023 Population	2045, OFM	2045, Adjusted	Total Growth (Adjusted)	CAGR (Adjusted)	Total Growth (OFM)	OFM CAGR
low	235,800	258,231	274,065	38,265	0.69%	22,431	0.41%
middle	235,800	292,714	292,714	56,914	0.99%	56,914	0.99%
high	235,800	337,551	321,702	85,902	1.42%	101,751	1.64%

Source: OFM - Forecasting & Research, December 2022; and Leland Consulting Group
CAGR is the Compound Annual Growth Rate

Figure 5: Revised Population Forecast Ranges, Whatcom County



Source: OFM - Forecasting & Research, December 2022; and Leland Consulting Group

Note: P means projection. For example "p2045" is the projected population in the year 2045.

Allocation of Population to UGAs

After establishing a range of Countywide growth projections, the next step is to allocate future growth to UGAs. The process to develop technical allocations involves analysis of historical trends in population growth by UGA and assigning future growth based on these trends. The technical allocations will be used as a starting point for collaboration between the County and cities to make adjustments based on local plans, special circumstances, and other policy considerations.

Historical Population Estimates by UGA

Historical estimates of population by urban growth areas are shown in the table below. The estimates are based on current 2023 UGA boundaries. Non-UGA areas within the County are combined and treated as a separate "all other" geography so that totals sum to the Countywide figure. Figure 7 shows population for each UGA in 2013 and 2023, along with absolute growth between those two years. The final column shows each UGA's share of standing Countywide population in 2023, followed by the UGA share of Countywide growth over that ten year period. The share of County population can be interpreted as essentially a given UGA's share of growth across the history of the County.

Bellingham, the primary city and UGA in Whatcom County, has a recent share of growth (42%) that is only slightly lower than its share of standing Countywide population (45%). Other UGAs such as Blaine, Ferndale, and Lynden have a 10-year growth share that is considerably higher than their share of standing population, reflecting more recent growth pressures. Fully 30% of the County's population can

be found in rural areas outside the ten official UGA geographies, although those areas account for just 19% of recent growth. That decreasing dependence on non-UGA areas for housing the County's growing population is consistent with the State of Washington's big-picture growth management policy and the concept of an urban growth boundary in general.

Figure 6: Historical Population Growth and Growth Share by UGA, 2013-2023

UGA	Pop. 2013	Pop. 2023	Growth 2013 to 2023	Average Annual % Growth	Share of County Population 2023	Share of 10-yr. County Growth
Bellingham	92,915	105,529	12,614	1.3%	44.8%	42.4%
Birch Bay	7,698	8,908	1,210	1.5%	3.8%	4.1%
Blaine	5,277	6,728	1,451	2.5%	2.9%	4.9%
Cherry Point	35	61	26	5.7%	0.0%	0.1%
Columbia Valley	3,060	3,577	517	1.6%	1.5%	1.7%
Everson	2,683	3,171	488	1.7%	1.3%	1.6%
Ferndale	12,962	16,762	3,800	2.6%	7.1%	12.8%
Lynden	13,208	16,696	3,487	2.4%	7.1%	11.7%
Nooksack	1,389	1,573	184	1.3%	0.7%	0.6%
Sumas	1,445	1,810	365	2.3%	0.8%	1.2%
Areas outside UGAs	65,349	70,985	5,637	0.8%	30.1%	18.9%
Total	207,937	235,800	29,779	1.3%	100.0%	100.0%

Source: OFM – Small Area Estimate Program (SAEP), December 2023; and Leland Consulting Group

Unless individual jurisdictions foresee significant changes to their local growth policies or confidently anticipate major shifts in the locational preferences of the homebuilding market, the more recent 10-year share-of-growth figure is assumed here to be the most appropriate numerical factor to use for apportioning out the forecasted County-level growth across Whatcom's smaller planning geographies.

Technical Allocations of Countywide Growth to UGAs

The following table show how that allocation plays out across UGAs under the low, middle, and high forecast scenarios for the County. As per the discussion in the previous section, the adjusted Countywide growth projected for 2023 to 2045 is 38,265 for the low, 56,914 for middle, and 82,902 for the high scenarios. These totals are multiplied by the recent share-of-growth percentages for each UGA, as shown below.

Figure 7: Technical Allocations of Adjusted Countywide Population Growth to UGAs, 2023 to 2045

UGA	Allocation Share	Allocated Growth by Scenario (2023 to 2045)			Average Annual % Growth (2023 to 2045)		
		Low	Middle	High	Low	Middle	High
Bellingham*	42.5%	16,242	24,158	36,462	0.7%	0.9%	1.4%
Birch Bay	4.1%	1,555	2,313	3,490	0.7%	1.1%	1.5%
Blaine	4.9%	1,865	2,774	4,186	1.1%	1.6%	2.2%
Cherry Point*	-	-	-	-	2.0%	2.7%	3.7%
Columbia Valley	1.7%	665	988	1,492	0.8%	1.1%	1.6%
Everson	1.6%	627	933	1,408	0.8%	1.2%	1.7%
Ferndale	12.8%	4,883	7,262	10,961	1.2%	1.6%	2.3%
Lynden	11.7%	4,481	6,665	10,060	1.1%	1.5%	2.2%
Nooksack	0.6%	237	352	531	0.6%	0.9%	1.3%
Sumas	1.2%	468	697	1,052	1.1%	1.5%	2.1%
Areas outside UGAs	18.9%	7,243	10,773	16,260	0.4%	0.6%	0.9%
Total Population Growth	100%	38,265	56,914	85,902	0.7%	1.0%	1.4%

Source: Leland Consulting Group, based on OFM – Small Area Estimate Program (SAEP), December 2023 .

Note: Although the Cherry Point UGA did account for a very small percentage (0.1%) of County growth over the past decade, it is assumed for this analysis to have no future residential capacity. Accordingly, Cherry Point's calculated shares of population growth (33, 50, and 75 for low, middle, and high) were instead assigned to Bellingham.

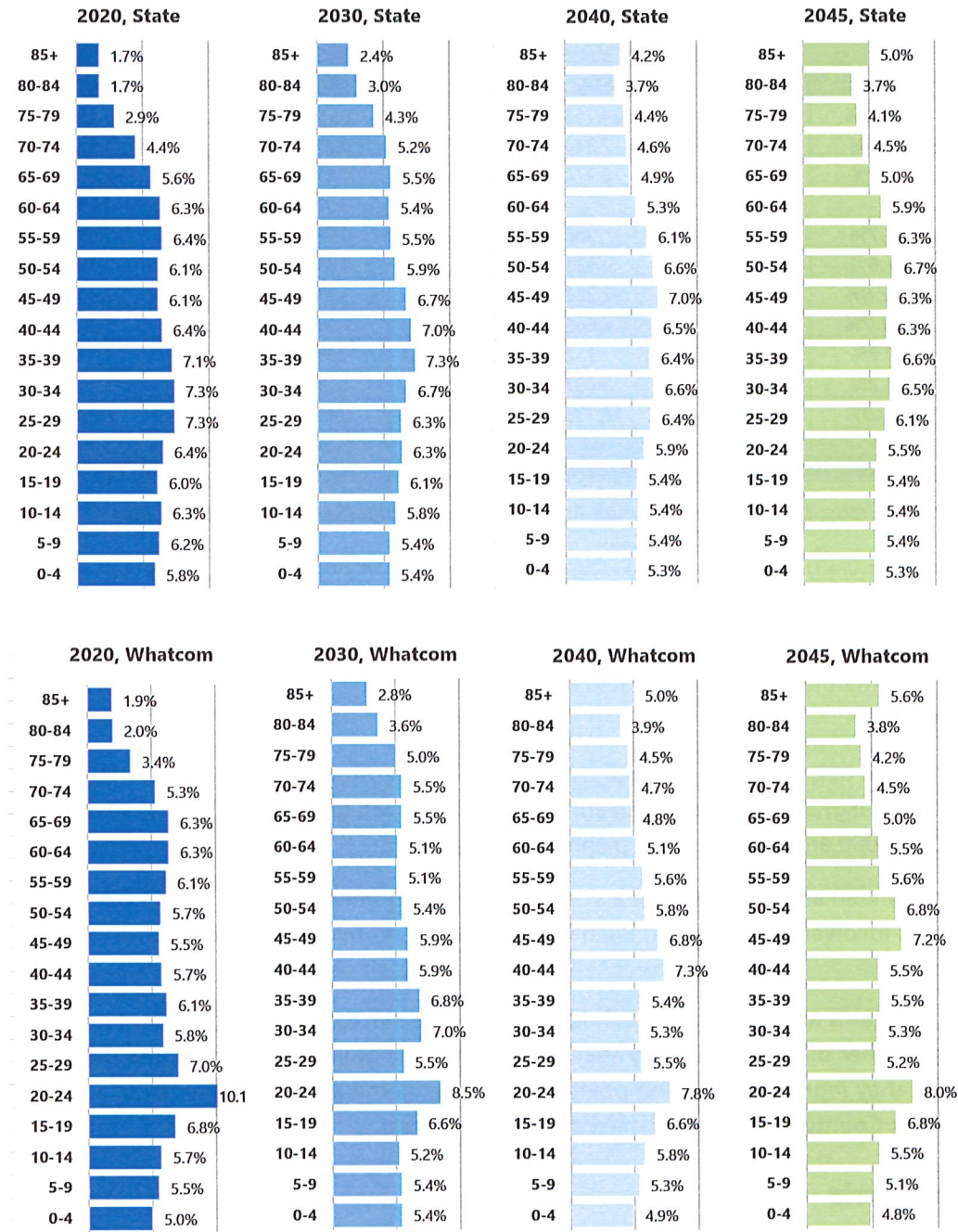
- Allocated in this manner, Bellingham would add between roughly 16,000 and 36,000 new residents by 2045.
- Although its share of growth has declined over time, the Other/Rural category of non-UGA areas receives the next-highest allocation, with anticipated population growth ranging between approximately 7,000 and 16,000 by the planning horizon.
- Ferndale and Lynden are set to grow at a similar pace, adding between 4,000 and 11,000 residents each, followed by Blaine and Birch Bay, with expected middle scenario growth in the mid-2,000s.

These population allocations are considered “technical” as they are strictly modeled on recent past growth performance, rather than reflecting any specific differences in goals or policies across the jurisdictions. As such, they represent a starting point subject to refinement through discussion and negotiation among the County and cities as a next step in the process.

Age Cohort Analysis

Age cohorts in Whatcom County and Washington State were analyzed to provide context for some of the broader population changes being projected by the Office of Financial Management. Figures 9 and 10 shows the age distributions by five-year increments in Washington State and Whatcom County for 2020 and as projected by the OFM for 2030 and 2040.

Figure 8: Age Distribution, Statewide and Whatcom County, 2020 and Projections to 2045



Source: OFM; Leland Consulting Group

To aid in tracking population shifts across age cohorts, another illustration of those same distributions is shown below in tabular form, with conditional formatting of cells to highlight population skews by

shades of green. This method helps to understand how the aging of the two major U.S. population “bulges” effects the population as they track with each passing decade.

The largest shares of total population statewide can be found among Millennials. In Whatcom County, a distinct third concentration can be seen for college age young adults.

In fact, in 2020, the age 20 to 24 bracket in Whatcom County briefly accounted for a double-digit share of Countywide population, as the prime college age overlapped with the “natural” Millennial bulge found in the non-college population.

Figure 9: Statewide and Whatcom County Population Shares by Age, 2020 to 2040

State of Washington					Whatcom County				
	2020	2030	2040	2045		2020	2030	2040	2045
0-4	5.8%	5.4%	5.3%	5.3%	0-4	5.0%	5.4%	4.9%	4.8%
5-9	6.2%	5.4%	5.4%	5.4%	5-9	5.5%	5.4%	5.3%	5.1%
10-14	6.3%	5.8%	5.4%	5.4%	10-14	5.7%	5.2%	5.8%	5.5%
15-19	6.0%	6.1%	5.4%	5.4%	15-19	6.8%	6.6%	6.6%	6.8%
20-24	6.4%	6.3%	5.9%	5.5%	20-24	10.1%	8.5%	7.8%	8.0%
25-29	7.3%	6.3%	6.4%	6.1%	25-29	7.0%	5.5%	5.5%	5.2%
30-34	7.3%	6.7%	6.6%	6.5%	30-34	5.8%	7.0%	5.3%	5.3%
35-39	7.1%	7.3%	6.4%	6.6%	35-39	6.1%	6.8%	5.4%	5.5%
40-44	6.4%	7.0%	6.5%	6.3%	40-44	5.7%	5.9%	7.3%	5.5%
45-49	6.1%	6.7%	7.0%	6.3%	45-49	5.5%	5.9%	6.8%	7.2%
50-54	6.1%	5.9%	6.6%	6.7%	50-54	5.7%	5.4%	5.8%	6.8%
55-59	6.4%	5.5%	6.1%	6.3%	55-59	6.1%	5.1%	5.6%	5.6%
60-64	6.3%	5.4%	5.3%	5.9%	60-64	6.3%	5.1%	5.1%	5.5%
65-69	5.6%	5.5%	4.9%	5.0%	65-69	6.3%	5.5%	4.8%	5.0%
70-74	4.4%	5.2%	4.6%	4.5%	70-74	5.3%	5.5%	4.7%	4.5%
75-79	2.9%	4.3%	4.4%	4.1%	75-79	3.4%	5.0%	4.5%	4.2%
80-84	1.7%	3.0%	3.7%	3.7%	80-84	2.0%	3.6%	3.9%	3.8%
85+	1.7%	2.4%	4.2%	5.0%	85+	1.9%	2.8%	5.0%	5.6%

Source: OFM; Leland Consulting Group

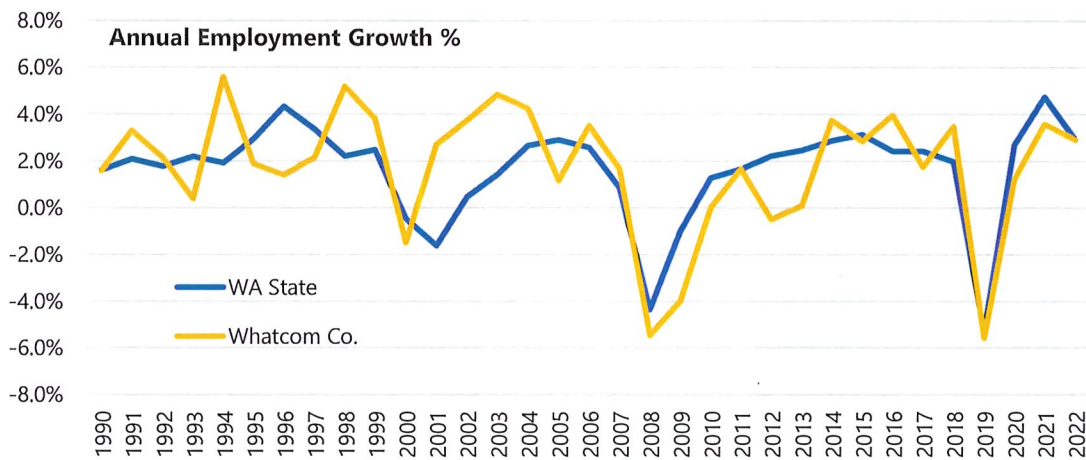
Although the Millennial and Baby Boomer generational cohorts were similar in size at their peak, the population shares for Boomers have begun to increasingly tail off as members of that group begin to reach average life expectancies. That said, a sizeable portion of Whatcom County’s population is reaching empty-nest and/or retirement age, where housing needs for some can begin to favor lower-maintenance options in walkable neighborhoods, such as urban missing middle housing. Others will be attracted to the continuum of senior housing options, ranging from age-restricted active senior apartments to assisted living and nursing care facilities.

In 2022, Whatcom County’s population aged 15 to 34 was just over 67,000, while the combined population aged 60 and up was approximately 61,000. By 2030, those two age ranges will have evened out at just over 70,000 each.

Countywide Employment Trends

Historically, annual employment growth in Whatcom County has closely tracked along with the state of Washington as a whole. In the past ten years, the County has grown at 1.5% annually, compared to 1.9% statewide, with the difference mainly owing to increased volatility at the local level. Over a twenty year span, the average growth rates roughly converge, with the County growing at 1.3% versus the state at 1.4% per year.

Figure 10: County vs. State Historical Employment Growth Rates by Year, 1990 to 2022

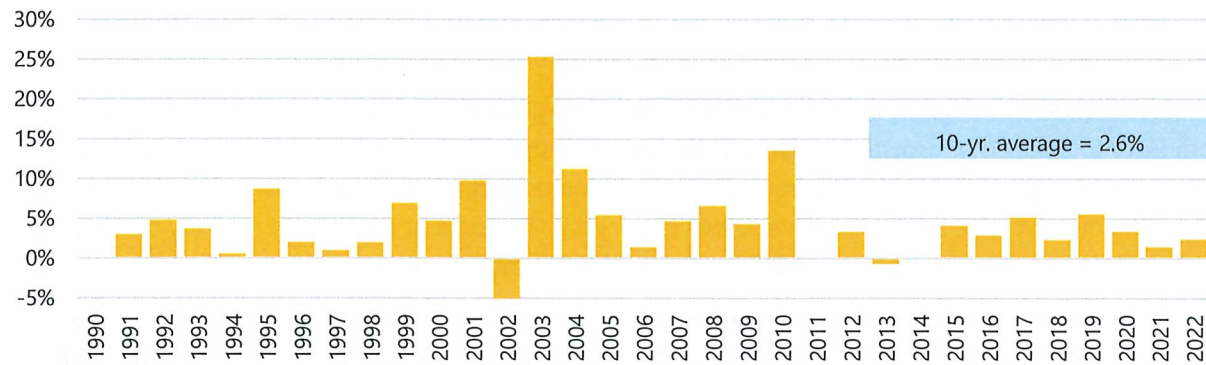


Source: U.S. Bureau of Labor Statistics

The next graph tracks the County’s share of statewide employment growth over the same time period. Though there have been spikes, such as in 2003 and 2010, when the County briefly captured an outside share of growth, more recent years have settled into a more predictable pattern, with Whatcom County accounting for 2.6% of annual statewide job growth over the past 10 years.

Since 2000, Whatcom’s share of total statewide jobs (all standing employment, rather than just growth) has remained within a relatively narrow range, from just above 3.0% on the low end, to just over 3.4% on the high end. Currently, the County accounts for 3.1% of total statewide employment.

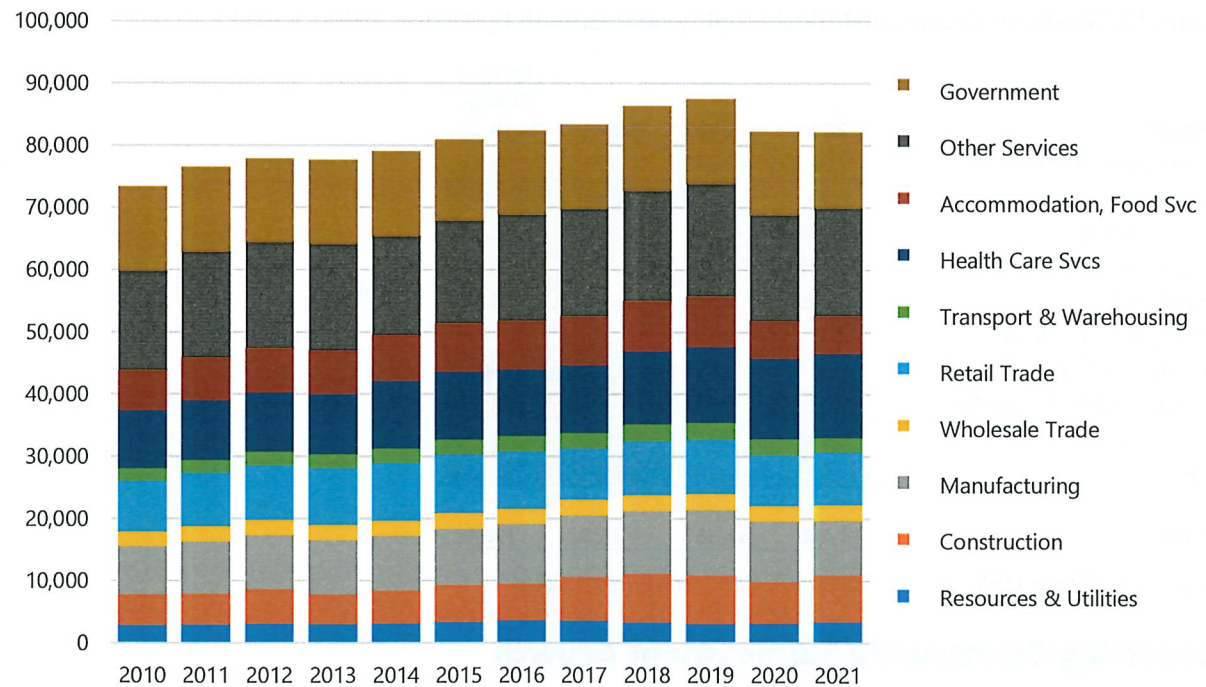
Figure 10: Whatcom County Share of State Employment Growth, 1990 to 2022



Source: U.S. Bureau of Labor Statistics

Employment by Industry

Figure 11: Whatcom County Employment by Industry Sector, 2010 to 2021



Source: U.S. Census Longitudinal Employer-Household Dynamics (LEHD) On the Map; and Leland Consulting Group
 Note: LEHD industry sector grouping differ slightly from State of Washington ESD categories and have been adjusted to match.

The figure below summarizes overall Countywide job growth (or loss) by those same groupings, to highlight areas of substantial change. The largest single growth sector was Health Care Services, which

added over 4,100 jobs in the County in just over a decade. At the same time, the Government sector lost nearly 1,500 jobs. Much of the employment decline occurred during 2020 and 2021, suggesting that temporary factors related to COVID-19 may account for some of that job loss.

The past decade saw a boom in Construction in the County, with that sector adding almost 2,700 jobs from 2010 to 2021. That growth was largely due to a very strong multifamily housing market, along with substantial transportation and infrastructure construction projects. The construction sector is historically one of the most volatile and responsive to business cycles. The current boom only recently reached annual job levels seen during the late 2000s, during the last major upcycle.

Despite the trends in automation reducing the labor requirements in Manufacturing, that sector has remained a somewhat surprising category for recent employment strength and expansion. The 8,700 manufacturing jobs in 2021 is up nearly 1,000 jobs from the 2010 employment level (even after falling from a peak of 10,400 jobs in 2019). In fact this relatively healthy trend in manufacturing is based on data that does not yet include some recent facility additions in the alternative energy subsector in the Bellingham market.

Figure 12: Whatcom County Historical Employment Growth by Sector, 2010 to 2021

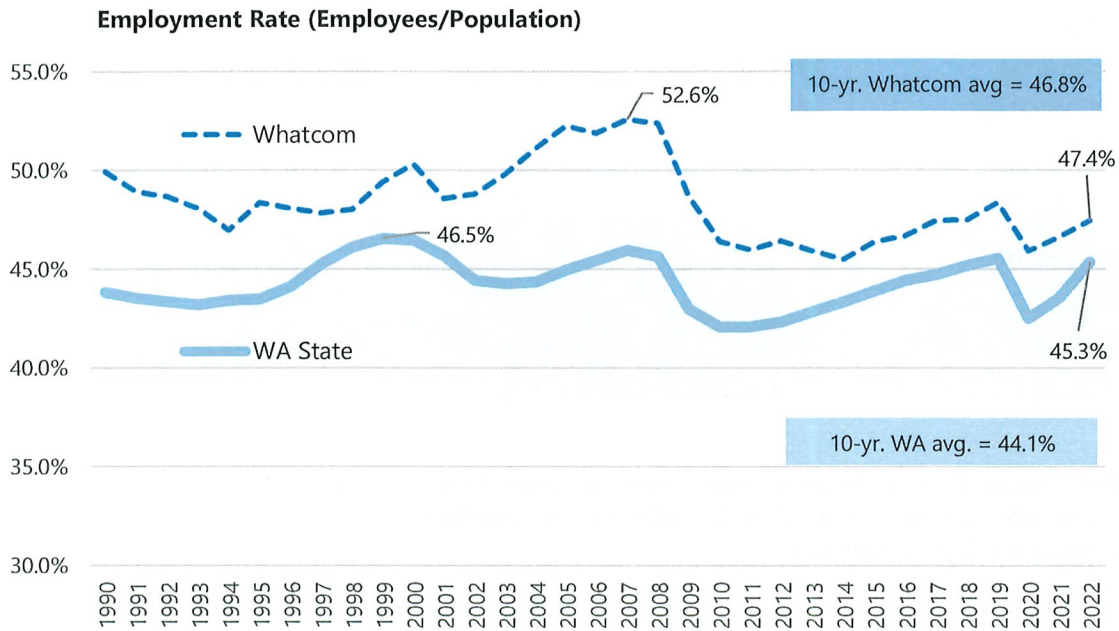
Industry	2010	2021	Growth	Percent Change 2010-21
Resources & Utilities	2,829	3,343	514	18.2%
Construction	4,885	7,556	2,671	54.7%
Manufacturing	7,738	8,699	961	12.4%
Wholesale Trade	2,425	2,629	204	8.4%
Retail Trade	8,099	8,450	351	4.3%
Transport & Warehousing	2,073	2,344	271	13.1%
Health Care Svcs	9,347	13,494	4,147	44.4%
Accommodation & Food Svc	6,413	6,148	-265	-4.1%
Other Services	15,893	17,247	1,354	8.5%
Government	13,718	12,247	-1,471	-10.7%
Total	73,420	82,157	8,737	11.9%

Source: U.S. Census LEHD On the Map; and Leland Consulting Group

Projecting Countywide Employment Growth

Neither the Washington Employment Security Department (ESD) nor OFM generate long-range employment projections for Whatcom County specifically. Given this limitation, it is useful to examine the historical relationship between employment and population, which are typically correlated. The next exhibit shows recent trends in that ratio (referred to as the employment rate) for Whatcom County and Washington State.

Figure 13: Employment Rate (Employees/Population), Whatcom County vs. State of Washington, 1990 to 2022



Source: U.S. Bureau of Labor Statistics, OFM; and Leland Consulting Group

As an example, in 2022, Whatcom County had a population of approximately 231,000 and total employment of approximately 109,000. The employment rate for that year was 47.4% (109,000 divided by 231,000).

Over time, this ratio has historically remained relatively stable, falling largely within a fairly narrow, plus or minus 1%, band around an average of 46.77 over the past ten years in Whatcom County. This predictable relationship between population and employment allows for reasonably reliable estimates of future employment based on our forecasts for County population.

Figure 14: Projecting Future Employment Based on Employment Rate, 2023 to 2045

	Whatcom (low)	Whatcom (middle)	Whatcom (high)
2023 population	235,800	235,800	235,800
2045 population (proj.)	274,065	292,722	321,702
<i>Assumed employment rate</i>	46.77%	46.77%	46.77%
2023 employment, est.	112,633	112,633	112,633
2045 employment, proj.	128,185	136,912	150,466
Employment growth, 2023 to 2045			
<i>(including resource/ag industries)</i>	15,553	24,279	37,834

Source: U.S. Bureau of Labor Statistics, OFM, Leland Consulting Group

Notes:

- 2023 Whatcom County total employment was not available at the time of this analysis. We estimate 2023 based on the 2022 total plus an additional year of growth (at the statewide job growth rate).

Technical Allocation of Employment Growth to UGAs

Now that a low, middle, and high range of total employment growth has been established for Whatcom County, based on the historic ratio of employment to population (the employment rate), the next step is to allocate that Countywide growth across the County’s ten UGAs. That allocation applies the most current available (2021) distribution of jobs across industry types within those UGAs (and in the rural remainder of the County not included in any UGA).

To determine the proportion of Countywide employment accounted for by each UGA, we first obtained the most current geographic boundaries of each UGA in a GIS shapefile format. Those shapefiles could then be uploaded, one UGA at a time, to define selection areas within the U.S. Census’ LEHD-On the Map website to get estimated job counts across major industry sectors. Those LEHD results are returned using the 20 two-digit North American Industry Classification System (NAICS) code industry sector categories.

In order be useful for planning purposes, the 20 NAICS industry sectors are combined into broad industry categories, using the categorization scheme below (as was used in the 2016 allocation methodology

Figure 15: Translation of NAICS Industry Codes into Broad Industry Type Categories

NAICS	Industry Sector	Broad Industry Type (for allocations)
11	Agriculture, Forestry, Fishing & Hunting	Resources
21	Mining, Quarrying, & Oil & Gas Extraction	
22	Utilities	Industrial
23	Construction	
31-33	Manufacturing	
42	Wholesale Trade	
44-45	Transportation & Warehousing	
48-49	Retail Trade	Retail
51	Information	Comm'l
52	Finance & Insurance	
53	Real Estate & Rental & Leasing	
54	Professional, Scientific, & Technical Services	
55	Management of Companies & Enterprises	
56	Administration & Support, Waste Mgmt	
61	Educational Services	
62	Health Care & Social Assistance	
71	Arts, Entertainment, & Recreation	
71	Accommodation & Food Services	
81	Other Services (excl. Public Admin)	
92	Public Administration	

Source: Leland Consulting Group, using WCOG industry category definitions

The table below shows the share of existing jobs by those broad industry groupings for 2021, as found using the UGA boundary GIS layers uploaded individually to LEHD/On the Map for analysis. Running the same analysis for the County as a whole allowed for determination of the Other/Rural group lying outside any UGA boundary.

Figure 16: Share of Current (2021) Employment by UGA and Broad Industry Type

UGA	UGA Job Shares by Broad Industry Type				
	Resources	Industrial	Retail	Comm'l	Total
Bellingham	14.9%	44.5%	73.7%	71.4%	62.5%
Birch Bay	0.0%	0.3%	0.4%	0.6%	0.5%
Blaine	0.4%	5.2%	1.9%	2.2%	2.9%
Cherry Point	0.0%	7.1%	0.0%	0.3%	2.0%
Columbia Valley	0.0%	0.1%	0.1%	0.0%	0.1%
Everson	1.1%	1.4%	1.0%	0.6%	0.8%
Ferndale	2.0%	15.2%	8.0%	6.6%	8.8%
Lynden	2.1%	9.6%	7.3%	6.8%	7.4%
Nooksack	0.0%	0.5%	0.3%	0.3%	0.3%
Sumas	0.2%	1.5%	0.3%	0.3%	0.6%
Other/Rural	79.3%	14.6%	6.9%	10.8%	14.0%
Whatcom Total	100%	100%	100%	100%	100%
<i>% of Total Whatcom Jobs by Industry Category</i>	<i>3.8%</i>	<i>26.1%</i>	<i>10.3%</i>	<i>59.8%</i>	<i>100.0%</i>

Those total job shares by broad category (3.8% Resources, 26.1% industrial, 10.3% retail, 59.8%, commercial) were applied to the low, middle, and high employment projections to arrive at Countywide employment totals by industry group. These totals were used for allocation to the UGAs.

Figure 17: Countywide Growth Totals by Broad Industry Group Across Low, Middle, and High Scenarios

% of Total Whatcom Jobs by Industry Category	Scenario	Total Employment Growth to Allocate	Resources			
			Resources	Industrial	Retail	Comm'l
			3.8%	26.1%	10.3%	59.8%
Total Proj. Growth 2023-2045	Low	15,553	594	4,057	1,600	9,302
	Middle	24,279	928	6,333	2,497	14,521
	High	37,834	1,446	9,869	3,891	22,627

For example, we estimate that **15,553** total jobs will be added in Whatcom County from 2023 to 2045 under the low growth scenario.

Applying the retail share of jobs (**10.3%**), we get **1,600** low scenario retail jobs for allocation across the County.

Referring back to Figure 18, we then apportion those 1,446 jobs to the various UGAs based on their historical share of retail jobs. The Bellingham UGA gets 73.7% of all County retail jobs, so in the low scenario, is allocated **1,180** retail jobs ($73.7\% \times 1,600 = 1,180$) in the low scenario.

The final three tables below use this described method to allocate employment growth from the Countywide level to each of the constituent UGAs under each of the three growth scenarios.

Figure 18: 2023-2045 UGA Employment Growth Allocations by Industry, by Scenario

Low Scenario	UGA	Resources	Industrial	Retail	Comm'l	Total
	Bellingham	88	1,807	1,180	6,644	9,719
	Birch Bay	0	14	6	59	80
	Blaine	2	210	30	207	449
	Cherry Point	0	289	0	27	316
	Columbia Valley	0	4	2	3	9
	Everson	6	56	16	52	130
	Ferndale	12	615	129	616	1,372
	Lynden	13	388	117	635	1,152
	Nooksack	0	19	4	28	51
	Sumas	1	62	5	27	96
	Area outside UGAs	472	594	110	1,004	2,180
	Whatcom Total	594	4,057	1,600	9,302	15,553
Middle Scenario	UGA	Resources	Industrial	Retail	Comm'l	Total
	Bellingham	138	2,820	1,841	10,373	15,172
	Birch Bay	0	22	10	92	124
	Blaine	4	327	48	322	701
	Cherry Point	0	450	0	43	493
	Columbia Valley	0	6	3	4	13
	Everson	10	88	24	81	203
	Ferndale	19	961	201	961	2,141
	Lynden	20	606	183	991	1,799
	Nooksack	0	29	7	44	79
	Sumas	2	98	8	43	150
	Area outside UGAs	736	927	172	1,567	3,403
	Whatcom Total	928	6,333	2,497	14,521	24,279
High Scenario	UGA	Resources	Industrial	Retail	Comm'l	Total
	Bellingham	215	4,395	2,869	16,163	23,642
	Birch Bay	0	35	16	144	194
	Blaine	6	510	74	502	1,092
	Cherry Point	0	702	0	67	769
	Columbia Valley	0	9	5	7	21
	Everson	16	137	38	127	317
	Ferndale	29	1,497	313	1,498	3,337
	Lynden	31	944	285	1,544	2,803
	Nooksack	0	45	11	68	124
	Sumas	3	152	12	66	233
	Areas outside UGAs	1,147	1,445	268	2,442	5,302
	Whatcom Total	1,446	9,869	3,891	22,627	37,834

Appendix: Population & Employment Allocations, Select Years

Countywide Population & Employment Projections (select years)

Population	2023	2025	2031	2035	2045	2023 to 2045 Growth
low	235,800	236,799	249,210	256,903	274,065	38,265
middle	235,800	240,329	256,773	267,470	292,722	56,922
high	235,800	246,801	269,952	285,671	321,702	85,902

Population Growth	2023	2025	2031	2035	2045	2023 to 2045 Growth
low		500	1,887	1,945	1,695	38,265
middle		2,275	2,607	2,715	2,531	56,922
high		5,563	3,793	4,014	3,513	85,902

Total Employment	2023	2025	2031	2035	2045	2023 to 2045 Growth
low	112,633	110,755	116,560	120,158	128,185	15,553
middle	112,633	112,407	120,098	125,101	136,912	24,279
high	112,633	115,434	126,262	133,614	150,466	37,834

Resources Employment	2023	2025	2031	2035	2045	2023 to 2045 Growth
low	4,305	4,233	4,455	4,592	4,899	594
middle	4,305	4,296	4,590	4,781	5,233	928
high	4,305	4,412	4,826	5,107	5,751	1,446

Industrial Employment	2023	2025	2031	2035	2045	2023 to 2045 Growth
low	29,381	28,891	30,405	31,344	33,438	4,057
middle	29,381	29,322	31,328	32,633	35,714	6,333
high	29,381	30,111	32,936	34,854	39,250	9,869

Retail Employment	2023	2025	2031	2035	2045	2023 to 2045 Growth
low	11,584	11,391	11,988	12,359	13,184	1,600
middle	11,584	11,561	12,352	12,867	14,082	2,497
high	11,584	11,873	12,986	13,742	15,476	3,891

Commercial Employment	2023	2025	2031	2035	2045	2023 to 2045 Growth
low	67,363	66,240	69,712	71,864	76,664	9,302
middle	67,363	67,228	71,827	74,820	81,883	14,521
high	67,363	69,038	75,514	79,911	89,990	22,627

UGA Population & Employment Projections (select years)

Population - Middle	2023	2025	2031	2035	2045	2023 to 2045 Growth
Bellingham	105,529	107,447	114,413	118,944	129,641	24,112
Birch Bay	8,908	9,092	9,760	10,194	11,220	2,313
Blaine	6,728	6,949	7,751	8,272	9,502	2,774
Cherry Point	61	65	80	89	111	50
Columbia Valley	3,577	3,656	3,942	4,127	4,566	989
Everson	3,171	3,245	3,514	3,690	4,104	933
Ferndale	16,762	17,340	19,438	20,803	24,025	7,263
Lynden	16,696	17,226	19,152	20,404	23,361	6,666
Nooksack	1,573	1,601	1,703	1,769	1,925	352
Sumas	1,810	1,865	2,067	2,198	2,507	697
Other/Rural	70,985	71,842	74,955	76,980	81,759	10,774
County Total	235,800	240,329	256,773	267,470	292,722	56,922

Total Employment - Middle	2023	2025	2031	2035	2045	2023 to 2045 Growth
Bellingham	50,154	50,053	53,478	55,706	60,965	10,811
Birch Bay	394	393	420	438	479	85
Blaine	5,818	5,806	6,204	6,462	7,072	1,254
Cherry Point	8,010	7,993	8,540	8,896	9,736	1,727
Columbia Valley	100	100	106	111	121	22
Everson	1,561	1,558	1,664	1,734	1,897	336
Ferndale	17,086	17,052	18,218	18,977	20,769	3,683
Lynden	10,769	10,747	11,482	11,961	13,090	2,321
Nooksack	515	514	549	572	626	111
Sumas	1,734	1,731	1,849	1,926	2,108	374
Other/Rural	16,492	16,459	17,585	18,318	20,047	3,555
County Total	112,633	112,407	120,098	125,101	136,912	24,279

Resource Jobs - Middle	2023	2025	2031	2035	2045	2023 to 2045 Growth
Bellingham	1,917	1,913	2,044	2,129	2,330	413
Birch Bay	15	15	16	17	18	3
Blaine	222	222	237	247	270	48
Cherry Point	306	306	326	340	372	66
Columbia Valley	4	4	4	4	5	1
Everson	60	60	64	66	73	13
Ferndale	653	652	696	725	794	141
Lynden	412	411	439	457	500	89
Nooksack	20	20	21	22	24	4
Sumas	66	66	71	74	81	14
Other/Rural	630	629	672	700	766	136
County Total	4,305	4,296	4,590	4,781	5,233	928

UGA Population & Employment Projections (select years), cont.

Industrial Jobs - Middle	2023	2025	2031	2035	2045	2023 to 2045
						Growth
Bellingham	13,083	13,057	13,950	14,531	15,903	2,820
Birch Bay	103	103	110	114	125	22
Blaine	1,518	1,515	1,618	1,686	1,845	327
Cherry Point	2,089	2,085	2,228	2,321	2,540	450
Columbia Valley	26	26	28	29	32	6
Everson	407	406	434	452	495	88
Ferndale	4,457	4,448	4,752	4,950	5,418	961
Lynden	2,809	2,803	2,995	3,120	3,415	606
Nooksack	134	134	143	149	163	29
Sumas	452	452	482	502	550	98
Other/Rural	4,302	4,293	4,587	4,778	5,229	927
County Total	29,381	29,322	31,328	32,633	35,714	6,333

Retail Jobs - Middle	2023	2025	2031	2035	2045	2023 to 2045
						Growth
Bellingham	8,542	8,525	9,109	9,488	10,384	1,841
Birch Bay	47	47	50	52	57	10
Blaine	221	220	235	245	268	48
Cherry Point	0	0	0	0	0	0
Columbia Valley	15	15	16	17	18	3
Everson	112	112	120	125	137	24
Ferndale	931	929	993	1,034	1,132	201
Lynden	849	847	905	943	1,032	183
Nooksack	32	31	34	35	38	7
Sumas	37	37	39	41	45	8
Other/Rural	799	798	852	888	972	172
County Total	11,584	11,561	12,352	12,867	14,082	2,497

Comm'l Jobs - Middle	2023	2025	2031	2035	2045	2023 to 2045
						Growth
Bellingham	48,119	48,022	51,308	53,445	58,491	10,373
Birch Bay	428	427	456	475	520	92
Blaine	1,496	1,493	1,595	1,661	1,818	322
Cherry Point	199	198	212	221	242	43
Columbia Valley	21	21	22	23	25	4
Everson	377	376	402	419	458	81
Ferndale	4,460	4,451	4,755	4,953	5,421	961
Lynden	4,595	4,586	4,900	5,104	5,586	991
Nooksack	203	202	216	225	247	44
Sumas	197	197	211	219	240	43
Other/Rural	7,269	7,254	7,751	8,073	8,836	1,567
County Total	67,363	67,228	71,827	74,820	81,883	14,521

