Bellingham School District

Enrollment Trends and Projections

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Introduction
Enrollment: Past, Present, and Future

Enrollment in the Bellingham School District has increased over the past two years as the local and regional economy continues to rebound and population growth improves. Data from the Office of Financial Management (OFM) for the State of Washington suggests that the District has seen better population and housing growth in the past two years when compared to the previous five years. And recent population estimates for Whatcom County are very close to the population projections for the County that were completed in 2012. So what does the future look like?

The present report provides an updated forecast of the Bellingham School District's enrollment from 2017 to 2036. The last forecast, completed in 2015, predicted that the District would continue to see enrollment gains over the next two decades. Not surprisingly, the present forecast shows a similar trend, since the demographic trends in Bellingham and Whatcom County have not changed dramatically since the last forecast. We still see continuing K-12 enrollment gains in Whatcom County over the next two decades, consistent with the State's predicted increase in the Age 5-19 County population. The District currently enrolls about 42% of the County K-12 population. We expect this number to rise some over time with some fluctuations from year to year based on fluctuations in housing and population growth within the District's boundary area.

Introduction
Enrollment: Past, Present, and Future

In making these predictions we have taken note of several demographic trends. First, the population of the Bellingham School District's boundary area makes up about half of the population in Whatcom County. Although some outlying areas in Whatcom County may grow faster than Bellingham over the next two decades, it is reasonable to assume that overall growth in the County and the District will be correlated since the District makes up such a large proportion of the County population. As we look at the period between 2010 and 2015, the District did grow at a slightly lower rate than the rest of the County, but this gap has narrowed in the past two years. We should also make note of the assumptions in the City of Bellingham's comprehensive plan. That plan assumes that younger residents prefer living in vibrant city areas with access to various amenities. This trend has been noted in the Puget Sound and other areas around the country. If it pans out, it could lead to higher population growth in urban areas than we have seen in past decades.

Looking ahead, population growth in Whatcom County is expected to improve with growth of about half-a-percent more annually over the next decade than we saw in the period between 2010 and 2015. The recent population estimates from the State for the County, the City of Bellingham, and the School District show higher growth rates between 2015 and 2016 than we have seen in the previous five years. These trends point toward continuing increases in the District's enrollment.

Introduction
Enrollment: Past, Present, and Future

In addition to population growth, the county birth cohorts that will become eligible for school over the next two decades are projected to be about 200-400 students larger on an annual basis than the cohorts that entered school between 2000 and 2015. These larger kindergarten classes reflect a projected increase in the number of women reaching their childbearing years over the next decade, as well as the overall increase in the County population. This trend will also contribute to an increase in the K-12 enrollment in the District and Whatcom County overall.

Finally, the City of Bellingham's comprehensive plan predicts that housing within the District's boundary area will continue to increase, bringing in new residents. Some of these new residents will be families that already have children or that are likely to have children in the future. As a general rule, new single family housing can produce somewhere between 35-75 new students for every 100 homes that are built, and multi-family housing somewhere between 15-35 new students per 100 units. Although new home construction and development has slowed in recent years (compared to the trends we saw between 1990 and 2010), permit data from the City of Bellingham shows a marked increase in permit activity since 2012.

Introduction
Enrollment: Past, Present, and Future

Our near term forecast for 2017 uses data on births, population growth, as well as the City permit data to predict enrollment. Our analysis of the data from the past several years suggests that an average of City permit data from five years prior to each enrollment year, can help improve projections of the net gains that the District might see in enrollment in the upcoming year.

For longer term District projections we have used estimated growth in the general population and the Age 5-19 population to help predict enrollment. But in doing this we have also made some estimates of the number of new housing units that would be needed to house the population. Data from City and the County show that future new home development is planned not only within the City boundary area but also in the unincorporated areas of the District. We have used this data to help us refine school enrollment forecasts (more on this later) and as a way to check if our District forecast based on population growth seems reasonable.

We have also looked at some of the housing assumptions in the City of Bellingham's comprehensive plan. The City expects to see approximately 15,000 additional housing units added to the District's housing stock by 2036. Although we have not used this number in completing the projections, some of the graphs in later portions of this report show housing forecasts that are remarkably consistent with this estimate.

Introduction
Enrollment: Past, Present, and Future

As noted in the report from 2015, the general consensus in forecasting is that the average of multiple forecasts is likely to be a better indicator of future enrollment than any one individual forecast.* Following this recommendation we utilized five different methods for predicting future enrollment in the District, before completing our final forecast. Our final recommended forecast uses birth data, enrollment trend data from the past five years, some housing forecasts, and predicted growth in the overall County population to predict enrollment. The results of this forecast are reasonably close to the average of the other five forecast methods, lending some confidence to the methodology.

We have enrollment trend data and actual births to help us predict enrollment between 2017 and 2021, and we have a reasonable expectation of what housing and population growth might be over the next five years. Beyond that time frame it is quite possible that demographic trends could be different than what we have assumed from State and County forecast data, resulting in a different enrollment scenario than the one we anticipate in our main forecast. To account for this, we have created alternative low and high forecasts which show what might happen if population and housing growth in Bellingham and Whatcom County overall were to be lower or higher than our predictions for the main model. These forecasts reflect the general uncertainty of predicting enrollment beyond a five year window.

**See for example, John Armstrong (2001) Combining forecasts: A review and annotated bibliography. International Journal of Forecasting, (5), 559-583.*

Introduction
Enrollment: Past, Present, and Future

In this year's report we have also provided school forecasts which attempt to allocate the recommended District forecast into school attendance areas. Although we have completed this forecast at the school level it is reasonable for the District to group schools together to help with planning for specific areas of the District. The larger aggregated numbers are likely to be more accurate and reliable that any individual school projection. School projections, generally, are less reliable than District by grade level projections because they are based on smaller numbers, making it harder to discern the difference between an actual trend in the data and random variation. The problem here is analogous to small sample sizes in polling. The smaller the sample size the wider is the margin of error.

In spite of this problem, the school projections provide some indication of which schools are likely to trend up, down, or remain the same in the future. This information can be used to guide facility and other planning decisions in the District.

In completing the school forecasts we have considered future home development data from the City of Bellingham and Whatcom County. This information, along with recent school enrollment trends was used to produce the school forecast. As a general rule this method should be reasonably accurate for predicting enrollments over a five year period. Similar to the District forecasts, the numbers beyond a five year window tend to have higher projection error rates.

Introduction
Enrollment: Past, Present, and Future

As should be evident from the previous discussion, there is always some degree of uncertainty regarding future demographic trends. As a result, it is recommended that the District update these forecasts periodically (perhaps every three to five years) to take advantage of new information.

In the sections that follow we provide charts and tables detailing trends in enrollment, births, housing, and population. Each section is preceded by a set of bullet points that highlight the relevant information in each section. After this, we present the alternative total enrollment forecasts and the detailed forecasts by grade level for the District. The final section provides enrollment forecasts for the schools.

Enrollment Trends

Enrollment Trends

Highlights

- Enrollment in 2016 is trending below the medium range forecast completed in 2012 but slightly above the medium range forecast completed in 2015.

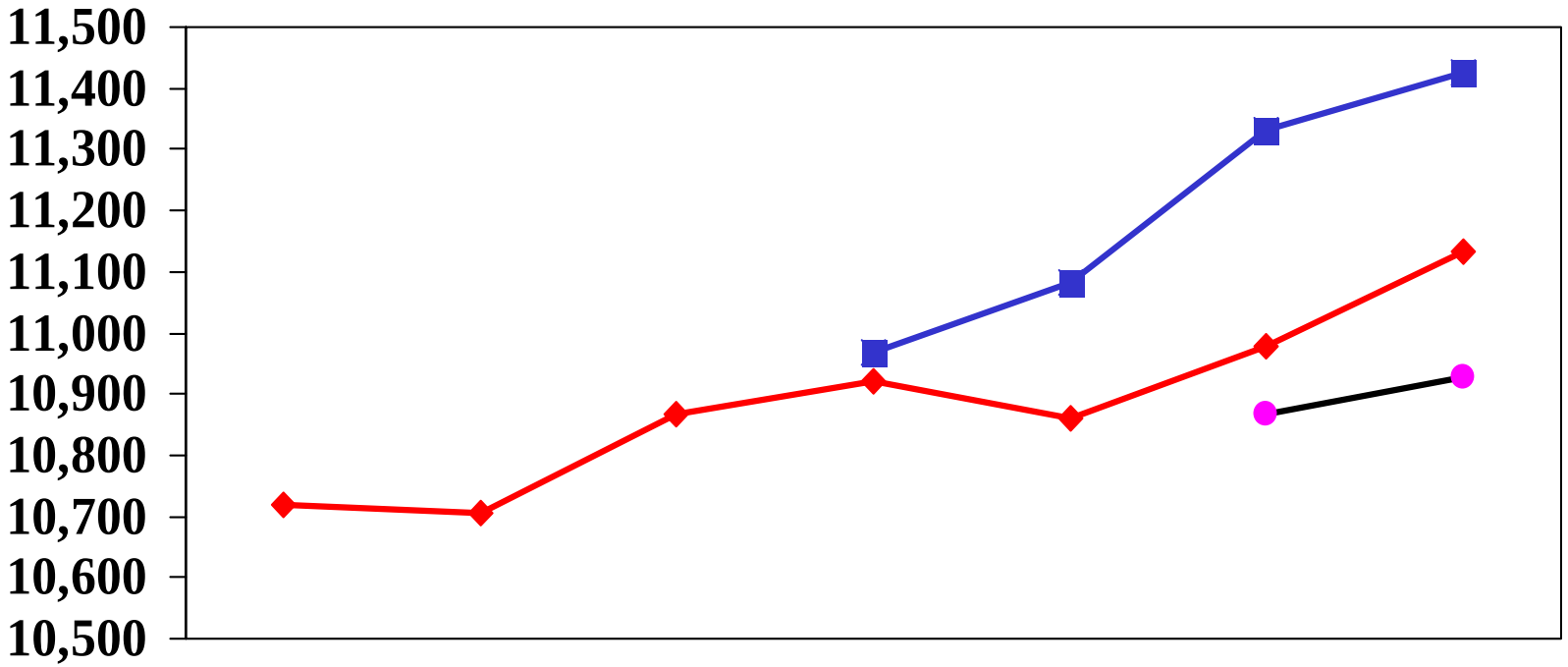
- Bellingham has increased its percentage of the County K-12 population since 2000. The District currently enrolls about 42.6% of the County's K-12 public school students as of October 2016.

- Overall enrollment in the County increased in the past year. Four districts saw their enrollment increase, and three others saw a decline in their enrollment.

- Private schools continue to enroll about 9% of the County K-12 population compared to public schools. The percentage has declined by less than one percent over the past few years and the latest estimate (2015) is consistent with the percentage of the past decade.

- Long term enrollment forecasts for the County suggest that enrollment will trend up over the next decade. This is consistent with the projected growth in the Age 5-19 population in State forecasts and with the projected increase in births that we see happening over the next decade (next section).

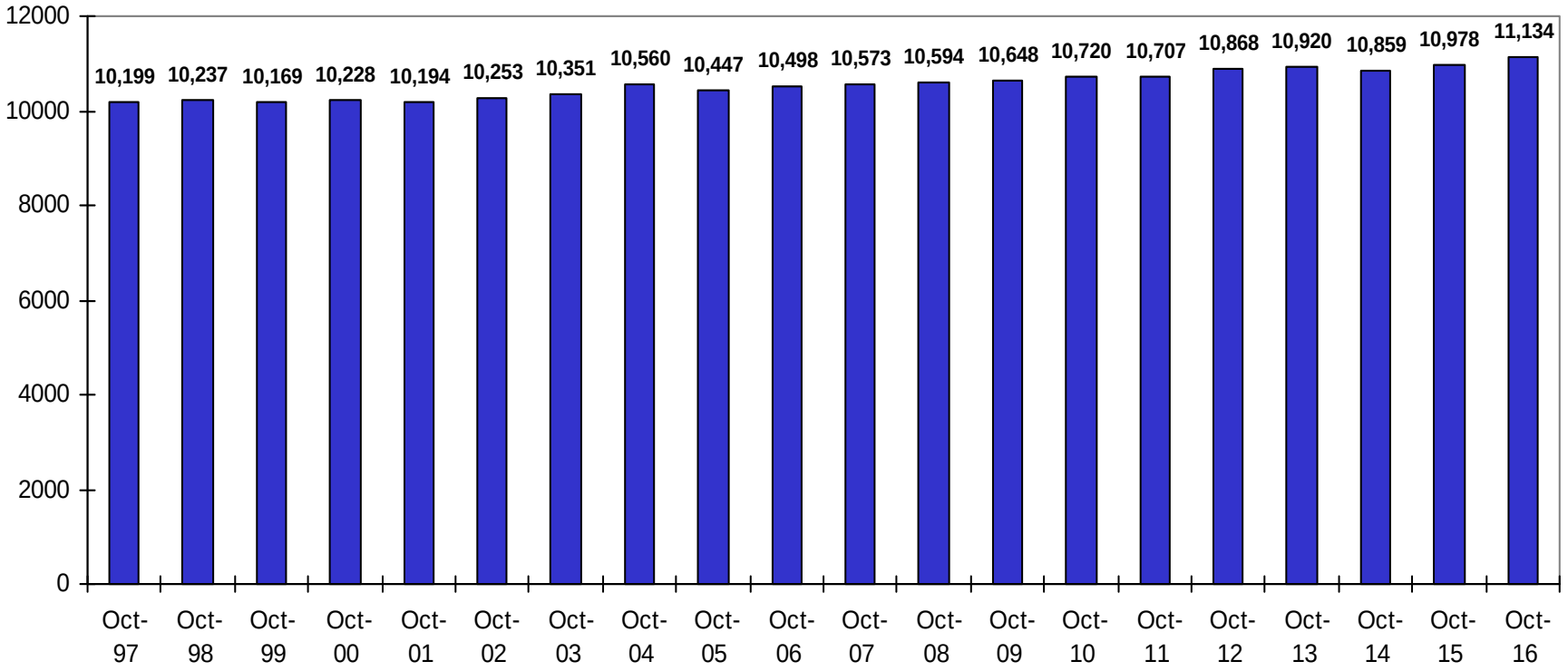
Actual Enrollment
Compared to 2012 and 2015 Forecasts



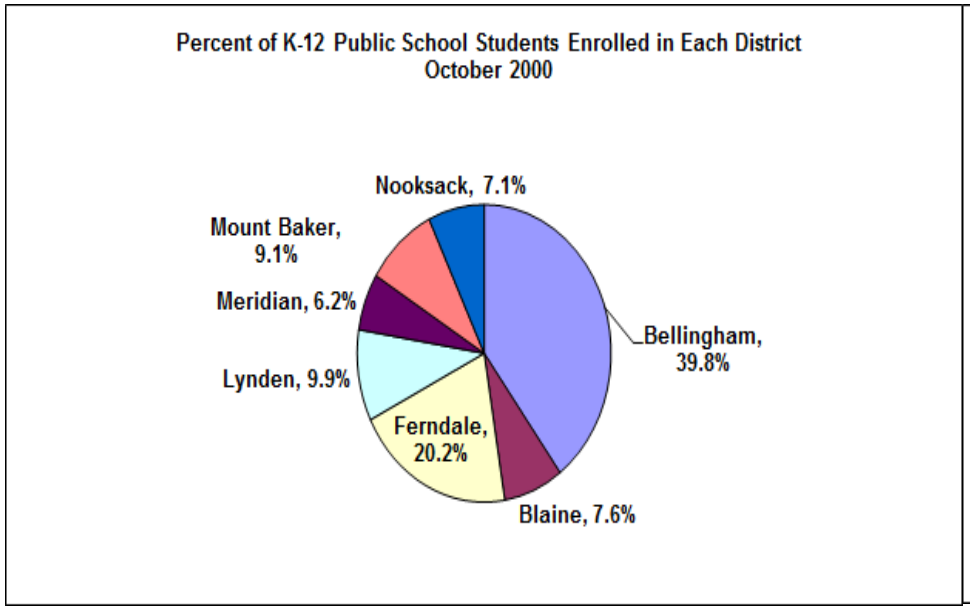
	Oct10	Oct11	Oct12	Oct13	Oct14	Oct_15	Oct_16
2012 Forecast				10,968	11,083	11,333	11,427
2015 Forecast						10,866	10,929
Actual Enrollment	10,720	10,707	10,868	10,920	10,859	10,978	11,134

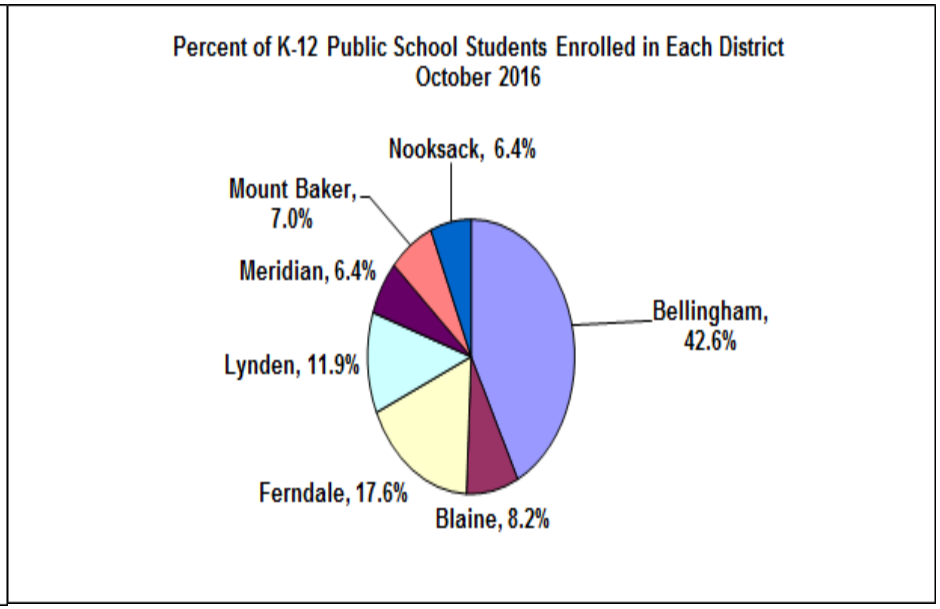
District Enrollment Trend

October Headcount
State P223 Reports
Does NOT include students enrolled in Running Start Full Time
or Students in the Open Doors Program



Whatcom County School Districts
Share of K-12 Public School Enrollment



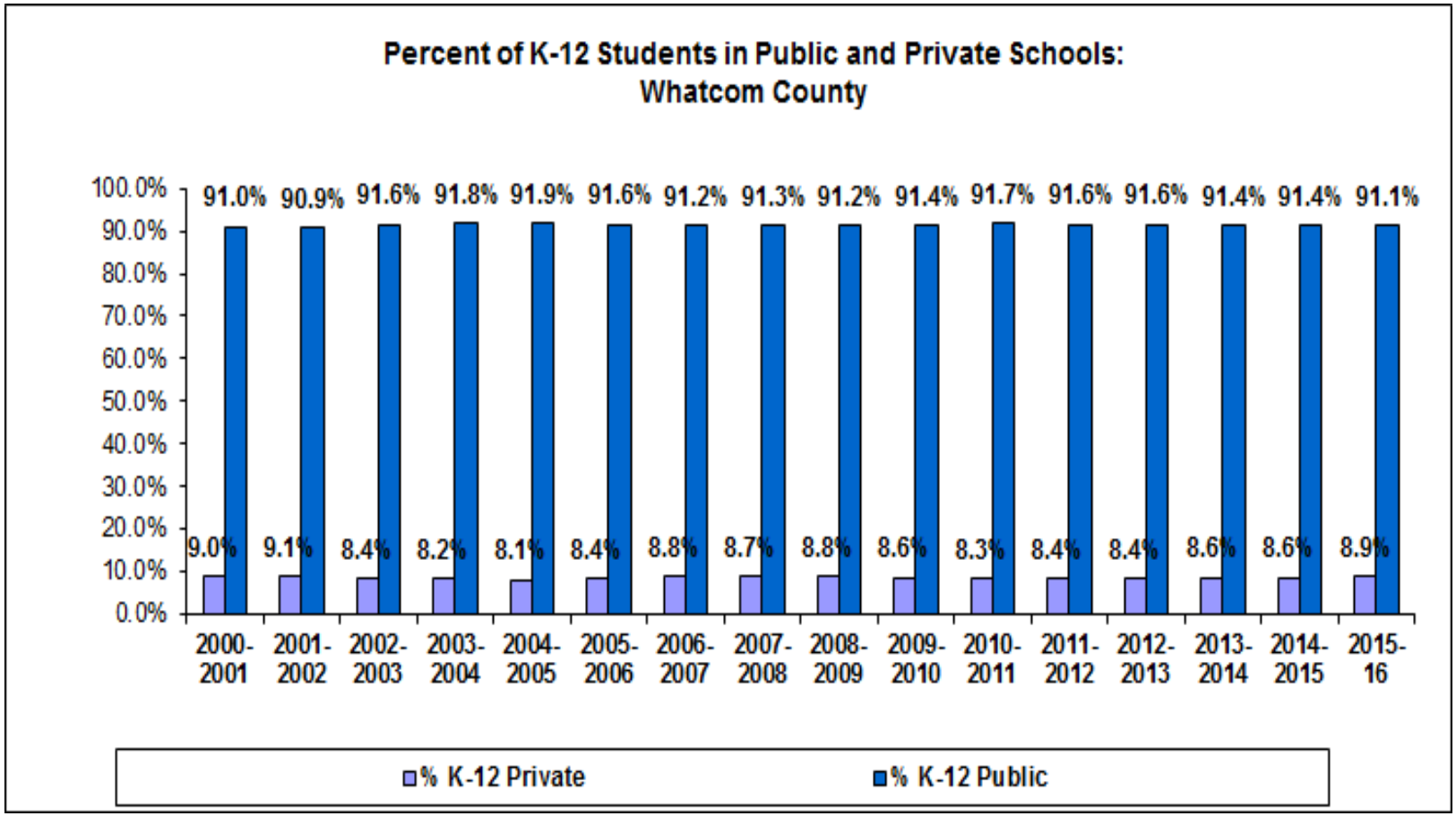


Percent of Public K-12

School District	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bellingham	39.8%	39.6%	39.8%	39.6%	40.0%	39.8%	39.9%	40.5%	40.2%	40.1%	40.1%	40.5%	40.9%	42.1%	42.2%	42.5%	42.6%
Blaine	7.6%	7.8%	7.7%	8.0%	8.5%	8.7%	8.6%	8.5%	8.2%	8.0%	8.1%	8.1%	8.0%	8.2%	8.2%	8.2%	8.2%
Ferndale	20.2%	20.2%	20.3%	20.3%	20.0%	20.1%	19.9%	19.5%	19.9%	19.5%	19.3%	19.3%	19.1%	19.3%	18.7%	18.0%	17.6%
Lynden	9.9%	9.8%	9.9%	10.1%	10.3%	10.4%	10.6%	10.7%	10.5%	10.5%	10.4%	10.5%	10.4%	10.8%	11.1%	11.4%	11.9%
Meridian	6.2%	6.1%	6.1%	6.0%	5.7%	5.7%	6.2%	6.2%	7.0%	7.8%	8.6%	8.3%	8.8%	6.7%	6.6%	6.6%	6.4%
Mount Baker	9.1%	9.3%	9.3%	9.3%	8.9%	8.8%	8.6%	8.3%	8.1%	7.9%	7.7%	7.4%	7.0%	7.1%	7.1%	7.3%	7.0%
Nooksack	7.1%	7.2%	6.9%	6.7%	6.7%	6.5%	6.3%	6.3%	6.1%	6.1%	5.7%	5.8%	5.8%	5.9%	6.1%	6.1%	6.4%
Total K-12	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Percent of Students Enrolled in Public and Private Schools in Whatcom County

Source: OSPI (October Enrollment)



Birth Trends

Birth Trends

Highlights

- The number of County births has remained right around 2,300 over the past three years (just below or just above that mark).

- Looking ahead we expect births to increase gradually over time. This is based on State forecasts of overall population growth and an expected increase in the number women aged twenty-five to forty-five.

- Due to the increase in County births and the projected increase in the Age 5-19 population over time (State forecasts), we expect K-12 enrollment in the County and in Bellingham to continue to grow over the next two decades.

- The District's share of county births (Kindergarten enrollment compared to County births five years prior to each enrollment year) has trended down from about 43% in 1993 to about 36% in 2015. We expect this number to remain relatively stable over the course of the forecast.

Birth Trends

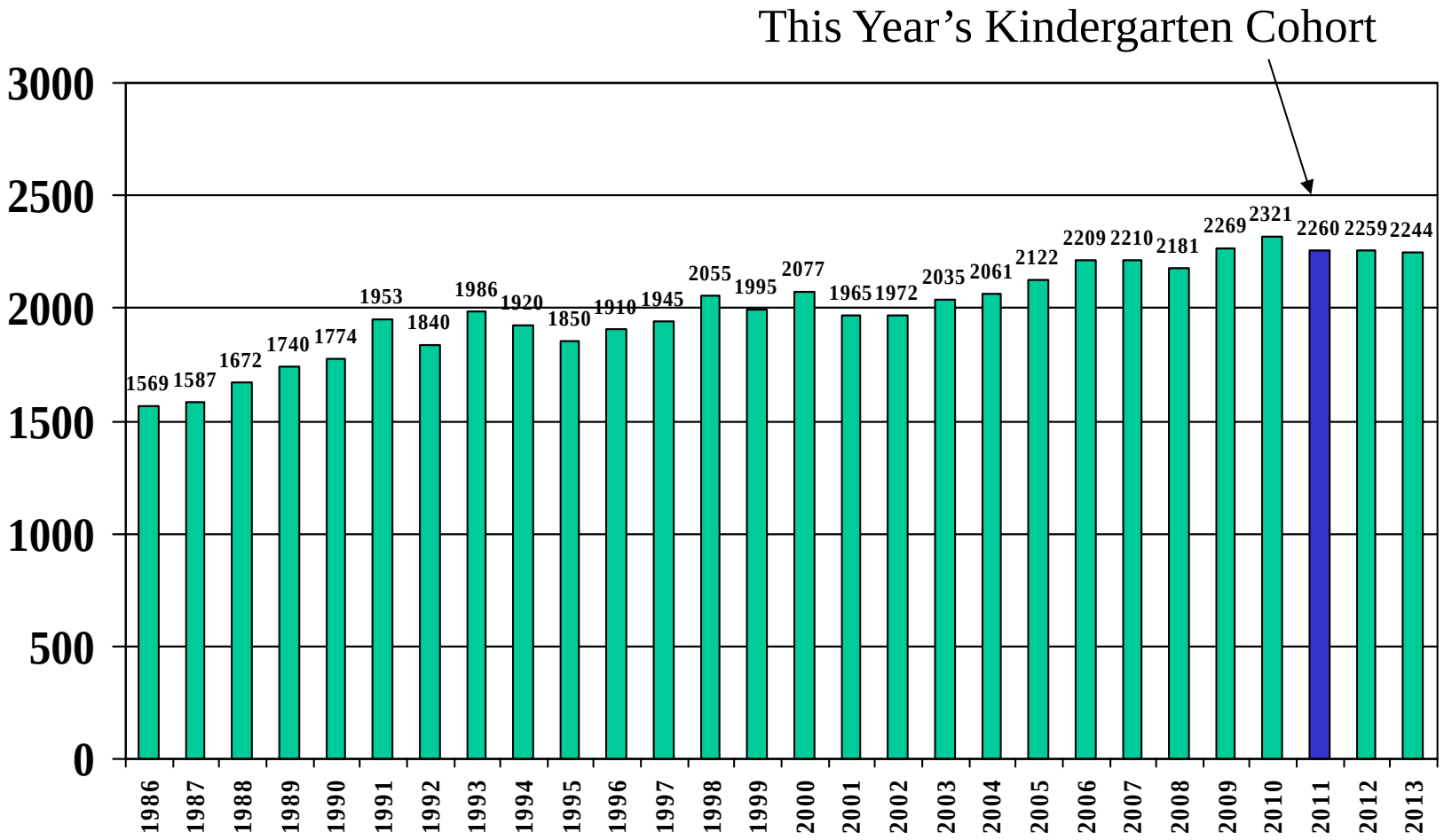
Highlights

- A comparison of births in the City of Bellingham to enrollment in the school district five years later shows a net loss of families prior to the start of school. Put another way, the number of families with preschool age children moving out of the City before their children reach school age, exceeds the number of families moving in or staying put.

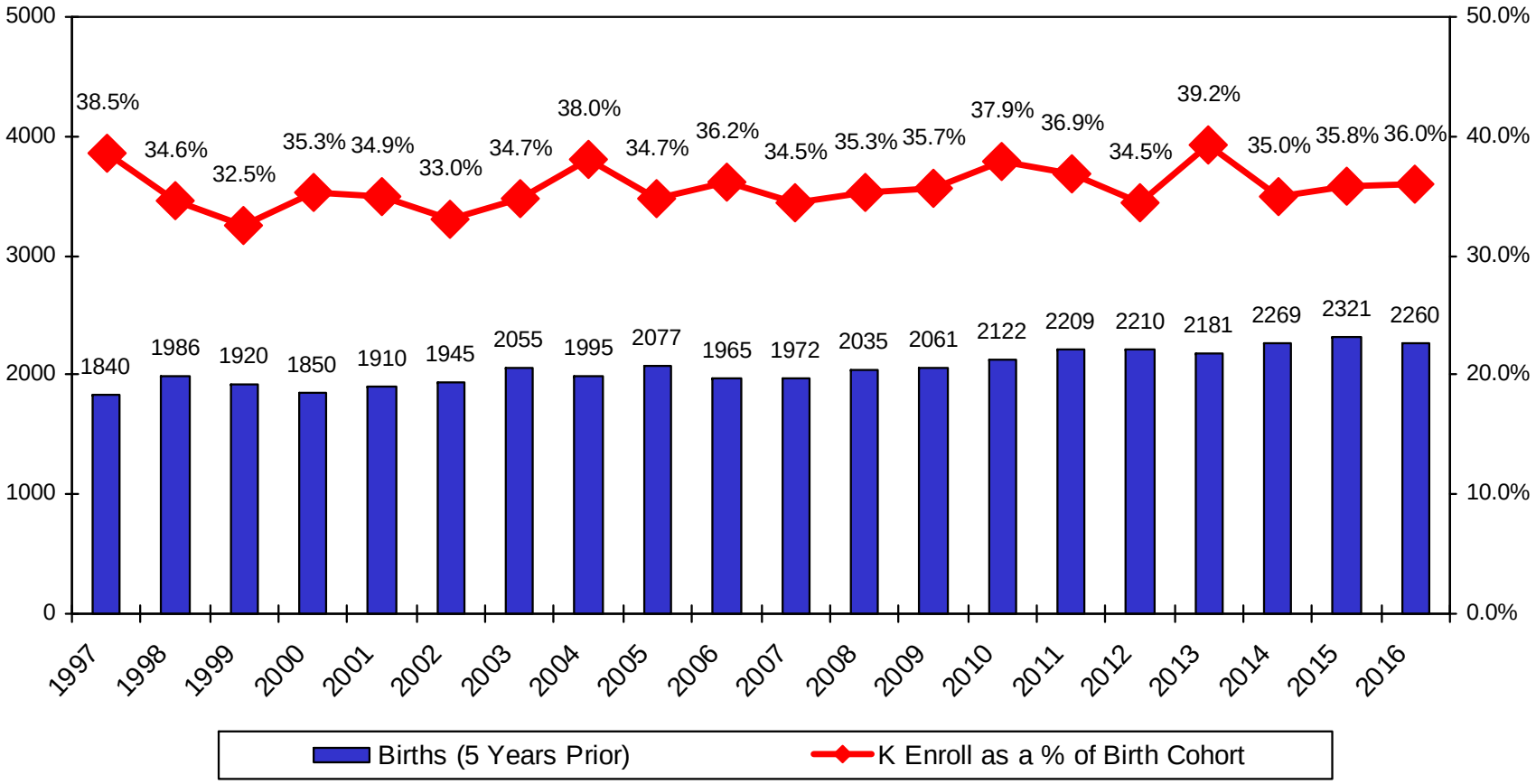
- In order to predict kindergarten enrollment we use the birth-to-k ratio at the county level, comparing kindergarten enrollment in a given year to the County births five years prior to each year. We consider the County birth number to be a more reliable predictor of future kindergarten enrollment than the City birth number based on our past experience with both indicators.

Whatcom County Births

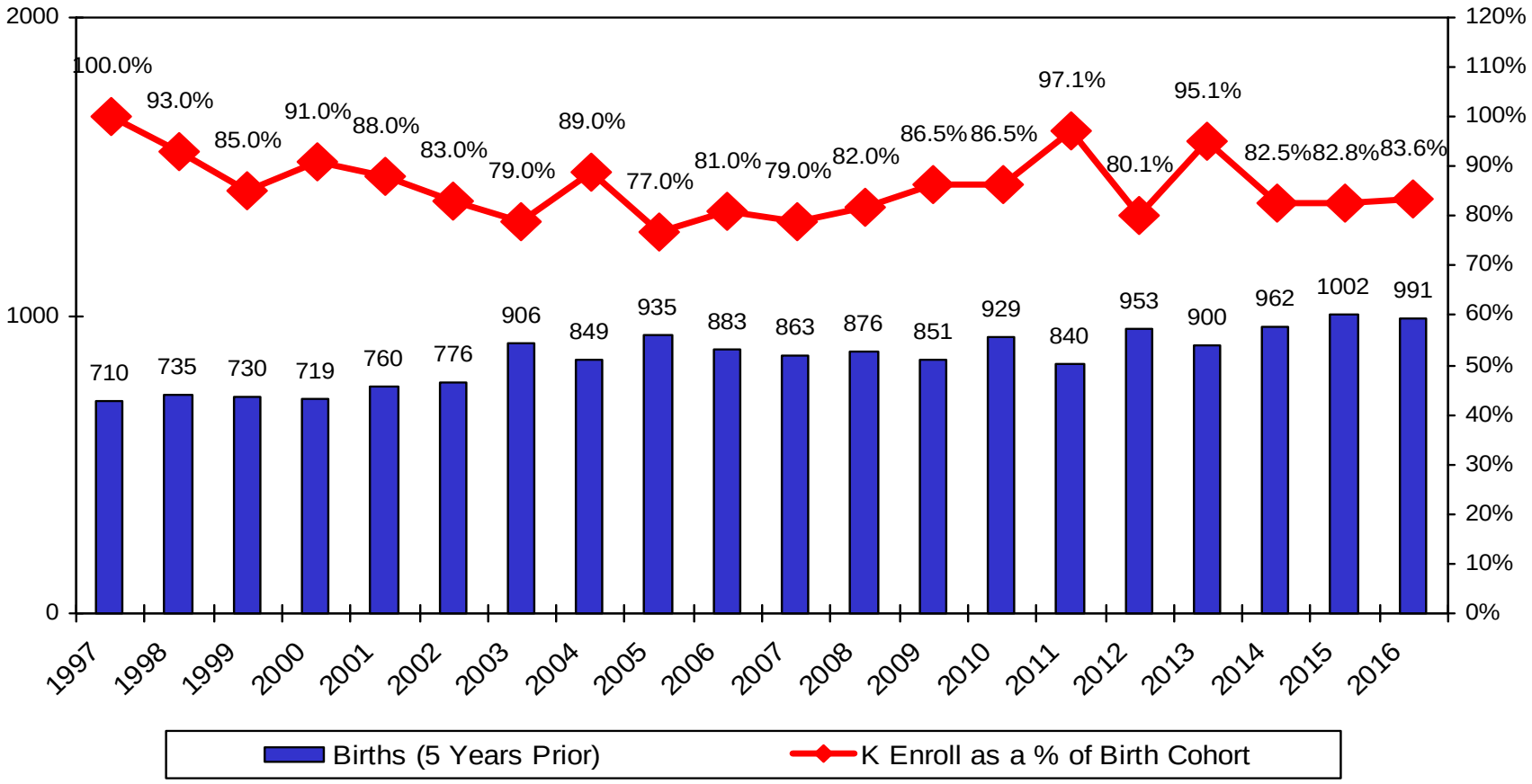
Source: Washington State Health Department



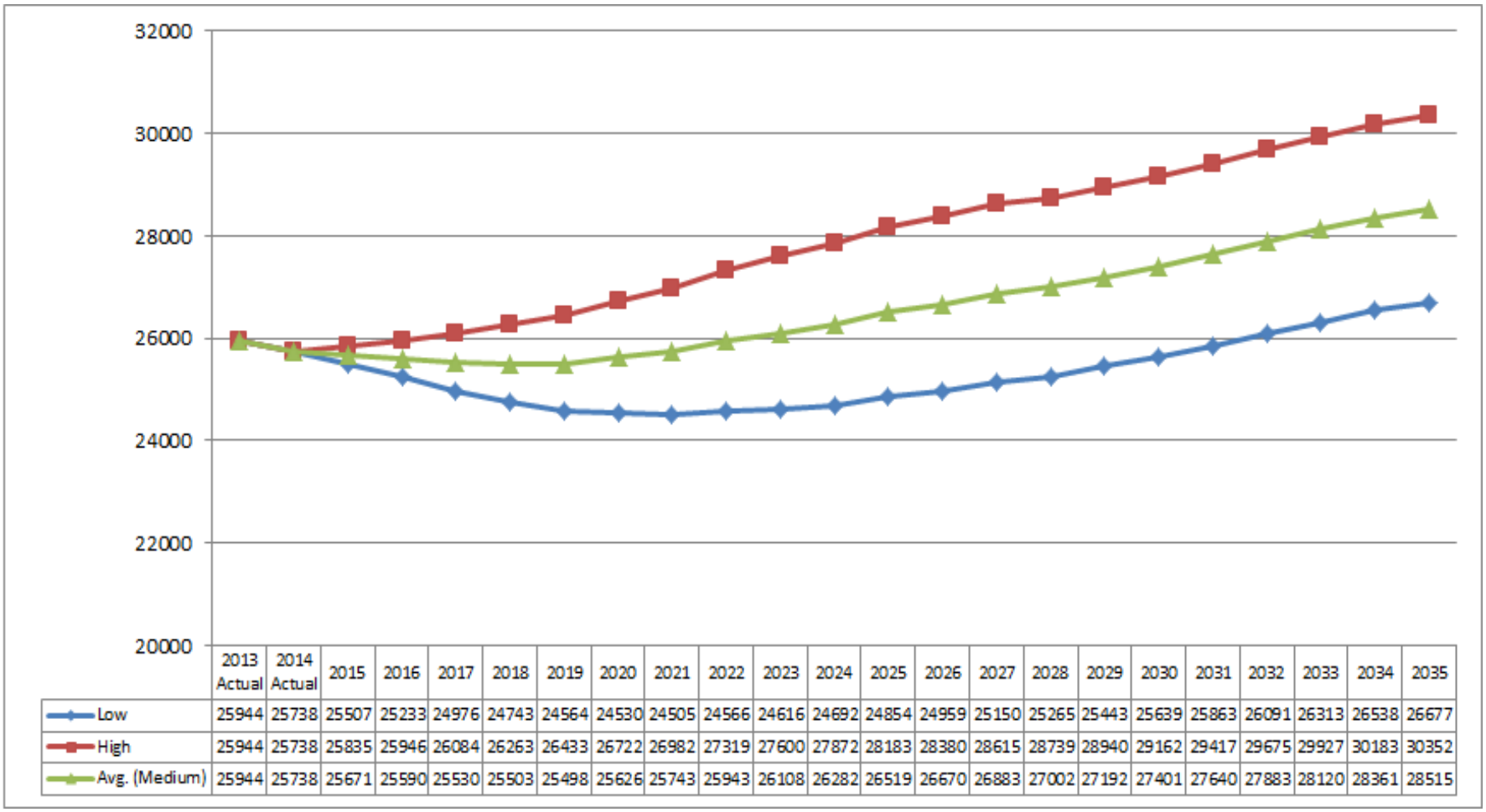
Bellingham: K Enrollment as a Percent of the Whatcom County Births (1997-2016)



Bellingham: K Enrollment as a Percent of the Bellingham City Births (1997-2016)



Forecast of the Whatcom County K-12 Public School Population Using Births and Historical Enrollment Trends
Low, High, and Medium (Average of Low and High)



	2013 Actual	2014 Actual	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Low	25944	25738	25507	25233	24976	24743	24564	24530	24505	24566	24616	24692	24854	24959	25150	25265	25443	25639	25863	26091	26313	26538	26677
High	25944	25738	25835	25946	26084	26263	26433	26722	26982	27319	27600	27872	28183	28380	28615	28739	28940	29162	29417	29675	29927	30183	30352
Avg. (Medium)	25944	25738	25671	25590	25530	25503	25498	25626	25743	25943	26108	26282	26519	26670	26883	27002	27192	27401	27640	27883	28120	28361	28515

Population Trends

Population Trends

Highlights

- Population growth in Whatcom County has improved in the last two years compared to the period between 2010 and 2014. The estimate of the County population in 2015 is very close to the State medium range forecast for the County that was completed in 2012.

- The average annual population growth rate for the Bellingham School District, and for the City of Bellingham has been slightly lower than the average annual growth rate for the County since 2010. This gap has narrowed in the past two years.

- The chart on page 27 shows the low, medium, and high forecast of the County population produced by the Office of Financial Management for the State of Washington. We used these forecasts to help us develop the alternative population forecasts for the Bellingham School District, since the State forecasts provide good alternative population scenarios for the region.

- Our main population forecast assumes that the Bellingham School District population will grow at about the same rate as Whatcom County overall. We have also modeled what might happen if population growth were to grow at a the same rate as the low and high forecasts for the County.

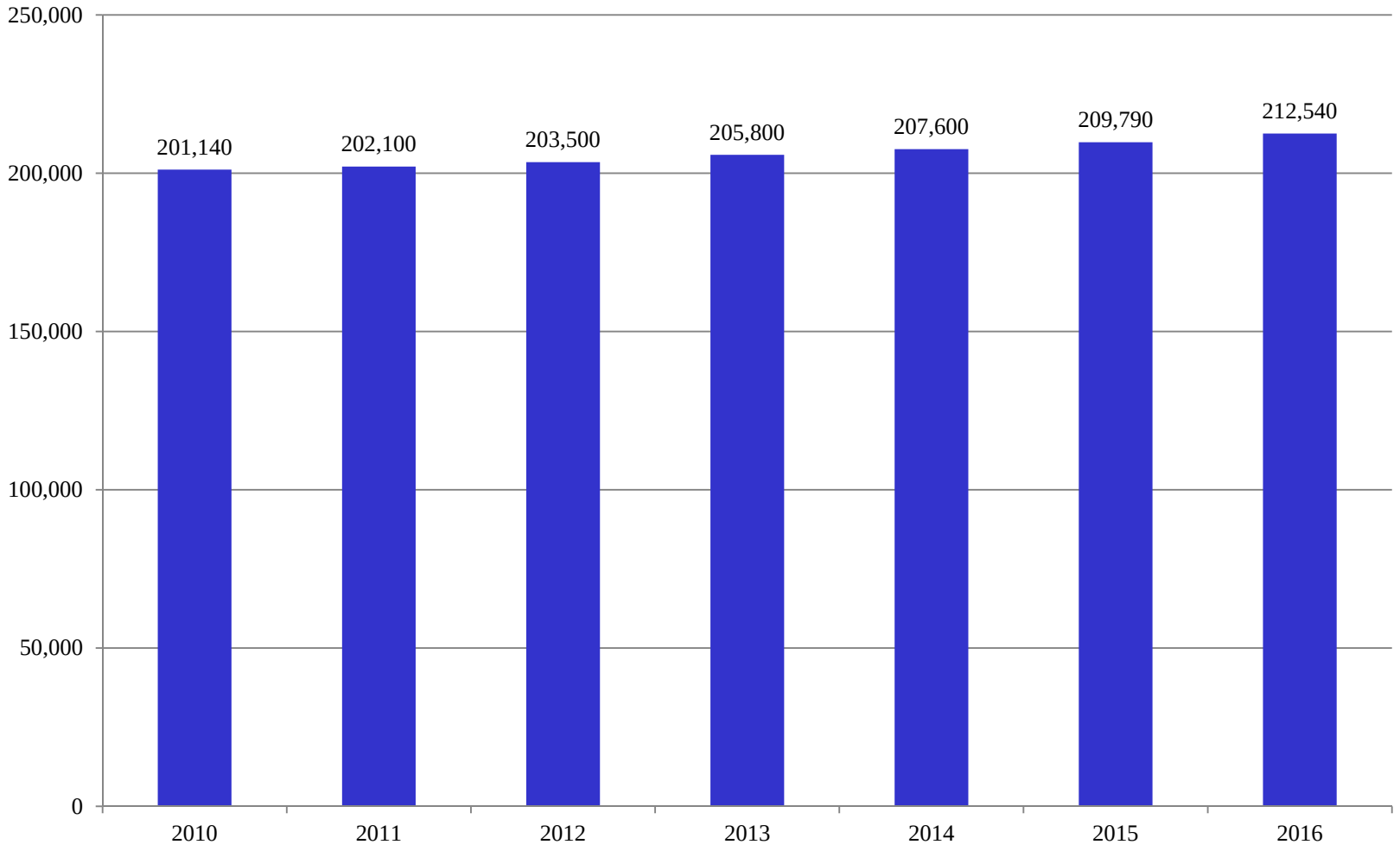
Population Trends

Highlights

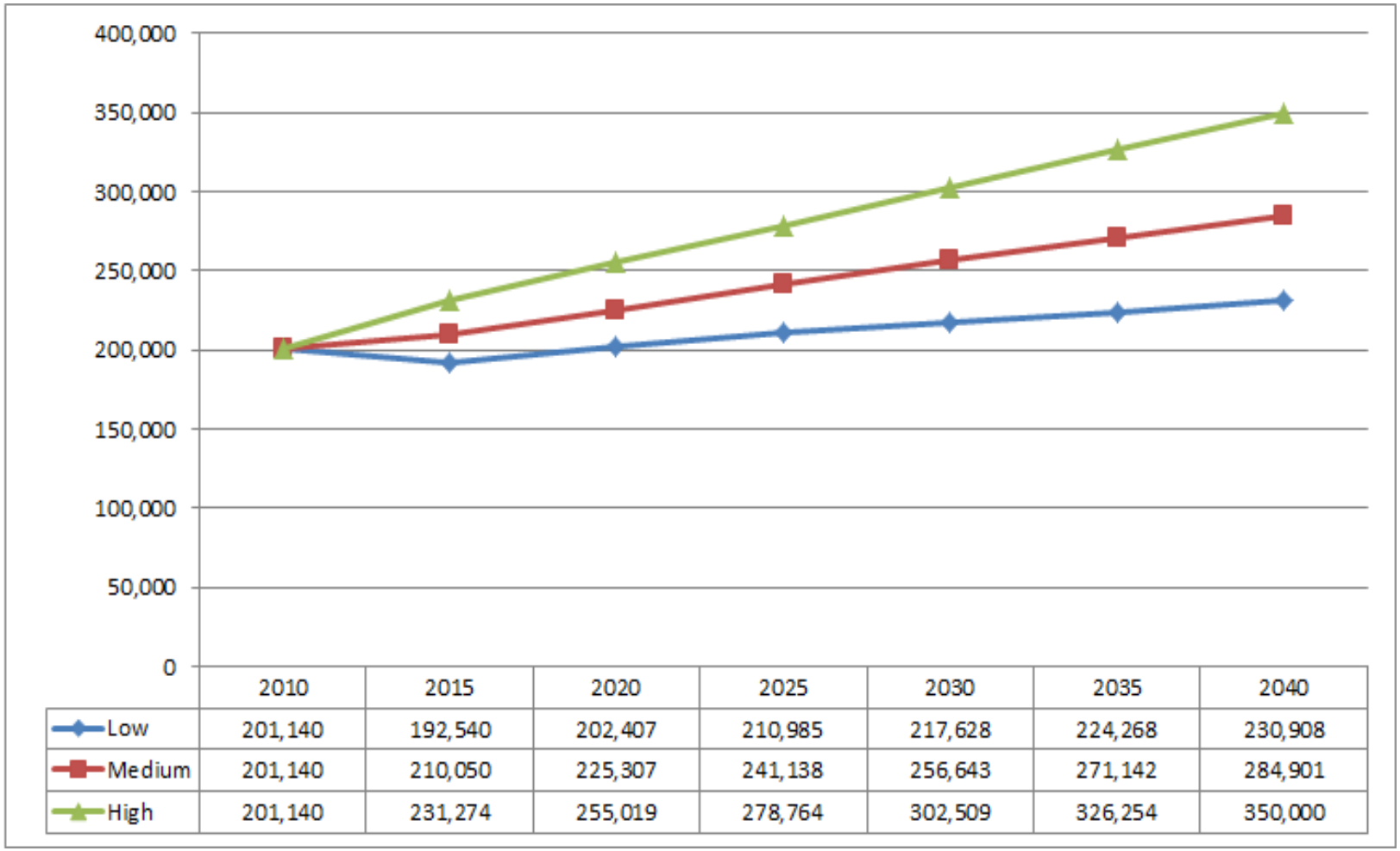
- The chart on page 28 shows alternative forecasts of the Bellingham School District resident population using the low, medium, and high range alternative forecast rates from the County population forecasts (from OFM).

- These alternative forecasts of the District's resident population provide the foundation for the low, medium, and high range K-12 forecasts presented in the latter part of this report.

Whatcom County Population Estimates
Census and State Estimates

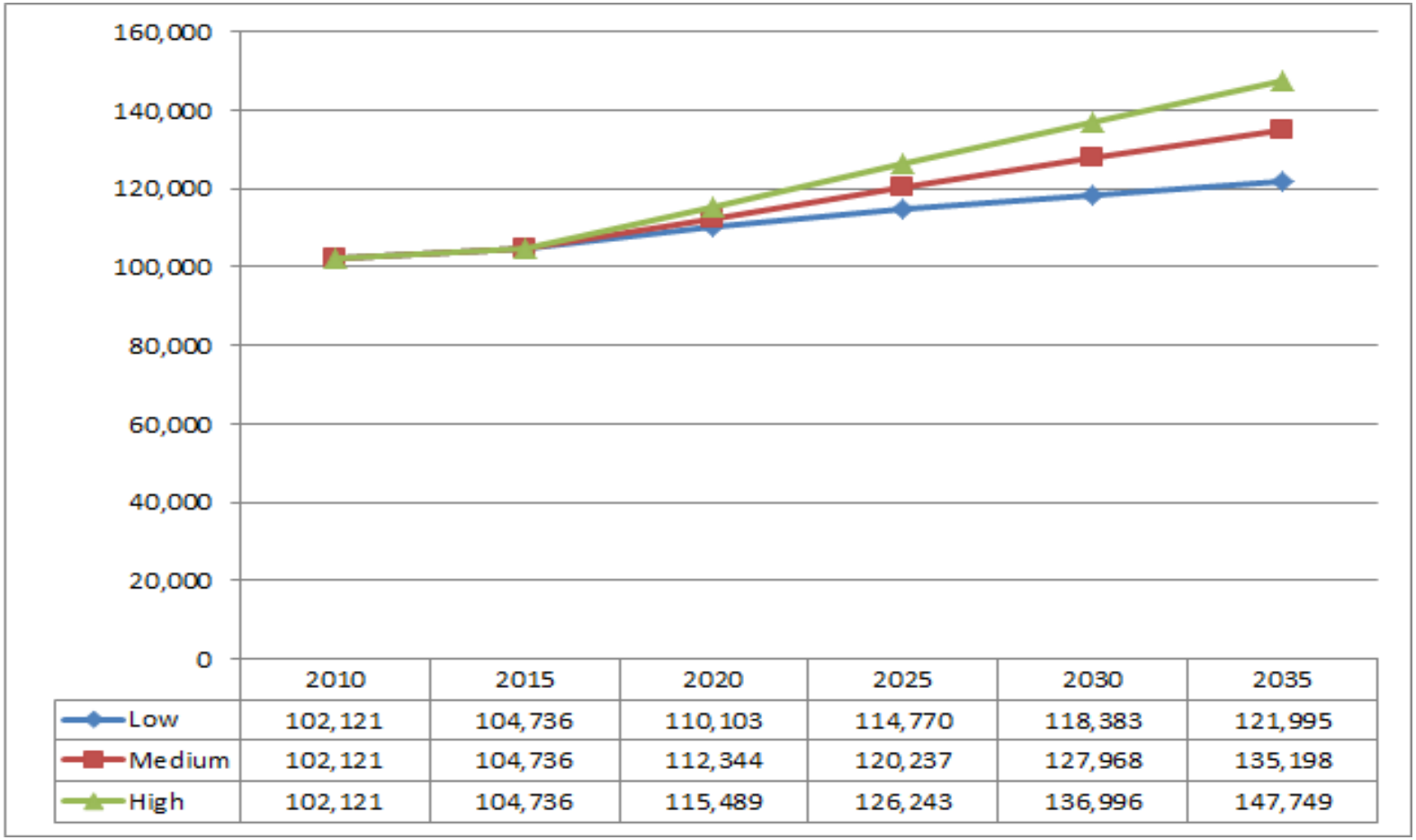


Low, Medium, and High Range Forecasts from the Office of Financial Management (State of Washington) For Whatcom County



	2010	2015	2020	2025	2030	2035	2040
Low	201,140	192,540	202,407	210,985	217,628	224,268	230,908
Medium	201,140	210,050	225,307	241,138	256,643	271,142	284,901
High	201,140	231,274	255,019	278,764	302,509	326,254	350,000

Alternative Forecasts of the Bellingham School District Resident Population Based on Alternative Growth Rates Derived from the Low, Medium, and High Whatcom County State Forecasts



	2010	2015	2020	2025	2030	2035
Low	102,121	104,736	110,103	114,770	118,383	121,995
Medium	102,121	104,736	112,344	120,237	127,968	135,198
High	102,121	104,736	115,489	126,243	136,996	147,749

A Population Based Forecast

Highlights

- The chart on page 30 shows the relationship between the projected trend in the Age 5-19 County population (from the OFM County forecast) and the percentage of the population that would be of school age in Bellingham (if it followed the County Age 5-19 percentage trend).

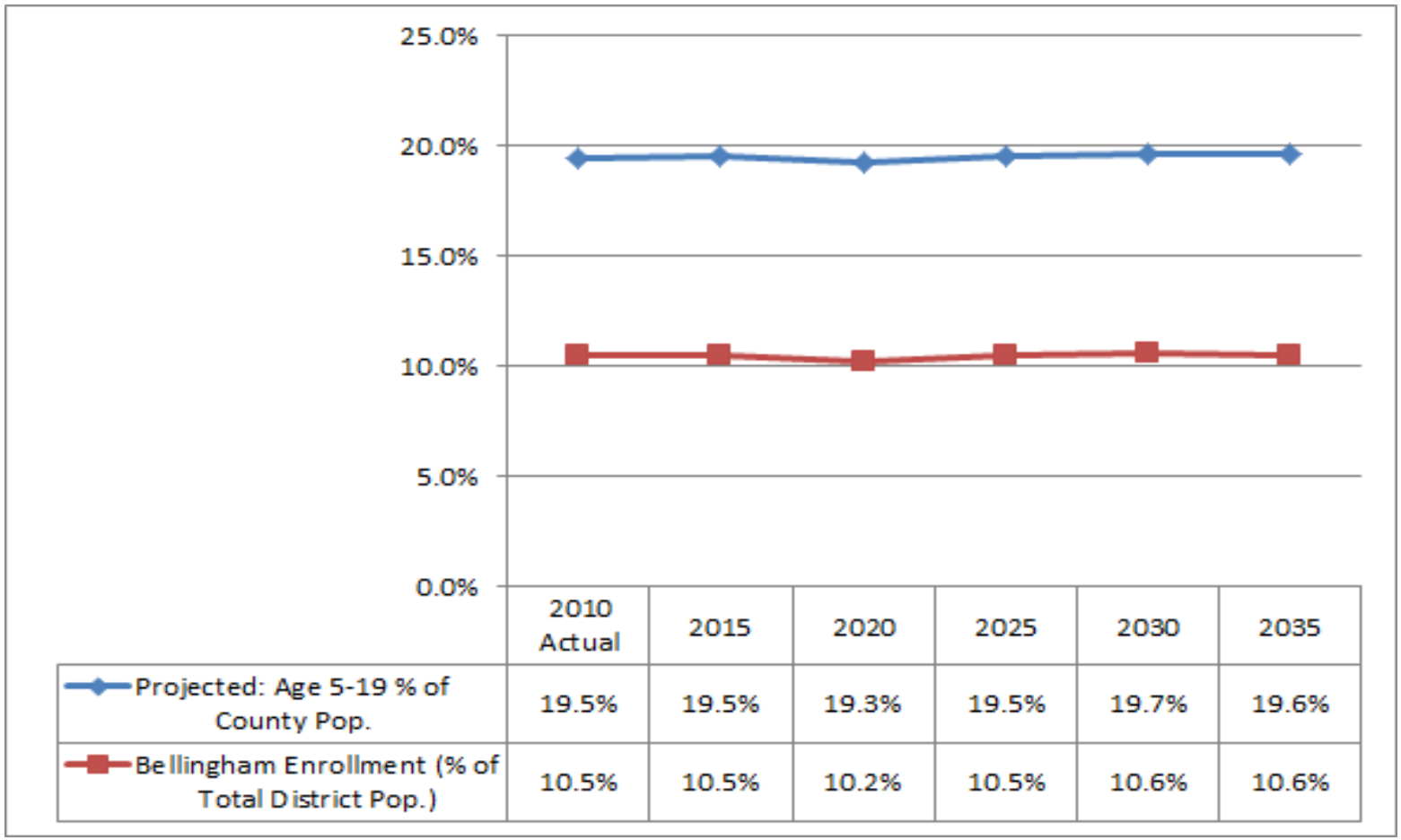
- It is worth noting that the 2015 estimate of the County Age 5-19 population is about 2,000 higher than the original State forecast. We have adjusted the State forecast of the Age 5-19 population with the latest estimates.

- If we apply the percentages in the chart on page 30 to the low, medium, and high range District population forecasts presented earlier, we come up with a low, medium, and high range forecast of the K-12 population in the Bellingham School District (page 31).

- This approach provides one model for predicting future enrollment. It assumes that the trends in the Bellingham School District align with the Age 5-19 County population trend.

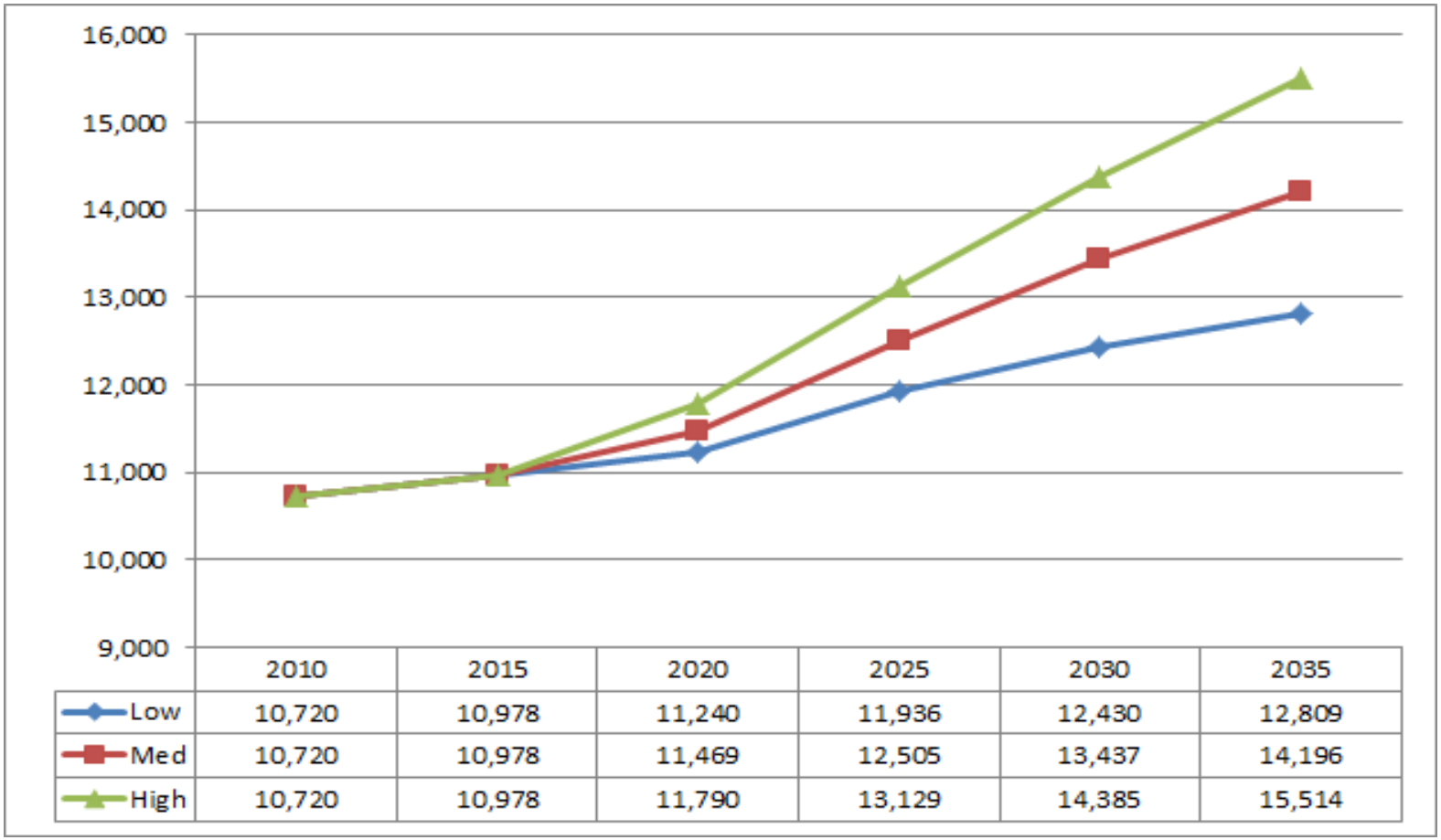
Trends in the Age 5-19 Population in Whatcom County Compared to Trends in the School-Age Population in Bellingham

Chart Assumes Bellingham Matches County Trend



	2010 Actual	2015	2020	2025	2030	2035
Projected: Age 5-19 % of County Pop.	19.5%	19.5%	19.3%	19.5%	19.7%	19.6%
Bellingham Enrollment (% of Total District Pop.)	10.5%	10.5%	10.2%	10.5%	10.6%	10.6%

Forecast of the Bellingham K-12 Population Using Different Population Forecasts (Low, Medium, and High) and the Projected % Expected to be School Age (Previous Graph)



	2010	2015	2020	2025	2030	2035
Low	10,720	10,978	11,240	11,936	12,430	12,809
Med	10,720	10,978	11,469	12,505	13,437	14,196
High	10,720	10,978	11,790	13,129	14,385	15,514

Housing Trends

Housing Trends

Highlights

- The District has added approximately 2,400 new housing units since the 2010 Census. This is estimate is higher than the estimates from the State which seem too low when we compare them to the permit data from the City of Bellingham. The number of permits issued by the City since 2010 exceeds the State estimates of housing. This revised estimate for the past six years is still well below the pace of new housing development that was seen between the 2000 and 2010 Census.

- Over the past five years the City of Bellingham has issued an average of 363 residential permits a year. The number of annual permits has been trending up since 2012 indicating an improvement in new home development.

- We have used the City permit data (along with other information) to help us predict enrollment in 2017. Beyond that point our forecast model uses population estimates and forecasts to predict future enrollment.

- Using our population forecasts and average household size data from the 2010 Census, as well as recent trends, we have made estimates of the amount of housing that is likely to be added to the District's housing stock over the next two decades. Our estimates are reasonably consistent with the projections from the City of Bellingham's latest comprehensive report.

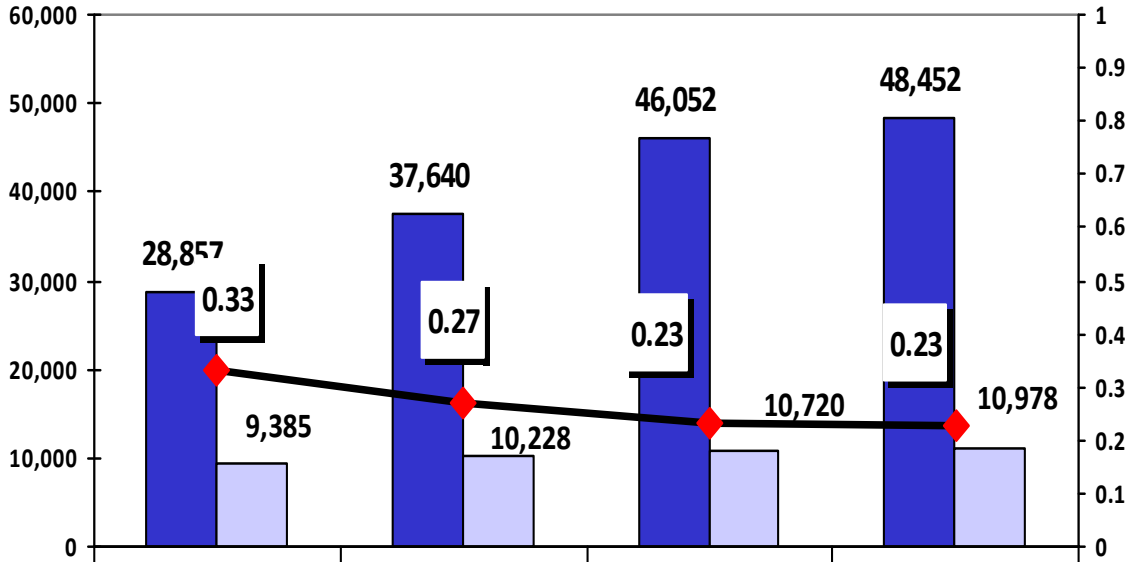
Housing Trends
Highlights

- The chart on page 37 shows our medium range forecast of the District's population (based on the medium range State forecast of the County population) and a forecast of future housing development using the average household size estimate from the Census. The population forecast, divided by the average household size number, allows us to estimate future housing totals.

- The number of K-12 students per household in the Bellingham School District has declined over the past two decades. In 1990 there were about 33 students for every 100 homes. By the 2010 Census this number had dropped to 23 students per 100 homes. This is consistent with trends seen throughout the County.

- The chart on page 38 shows a projection of the Bellingham School District population if we assume that the number of students per household is similar to the 2010 Census estimate over time. This number (about 23 students per 100 housing units) applied to the forecast of future housing development produces an estimate of future enrollment. This is another way to create a total enrollment forecast of the District's future population.

Housing Units (Vacant and Occupied) and Students Per Household (1990, 2000 and 2010 Census Data; 2015 Estimate Using City Permit Data)



	Census 1990	Census 2000	2010 Census	2015 Estim.
Housing Units	28,857	37,640	46,052	48,452
Bellingham Enrollment	9,385	10,228	10,720	10,978
Public School Students Per House	0.33	0.27	0.23	0.23

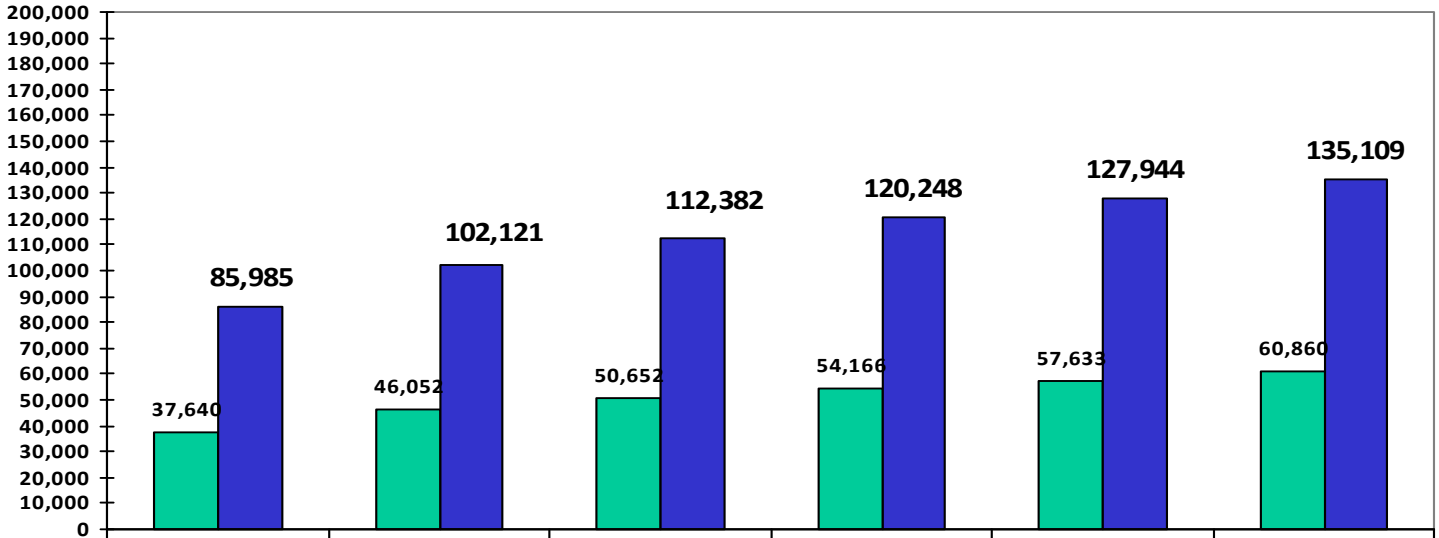
Housing Permits Issued:
City of Bellingham

City of Bellingham (Number of Units Permitted by Year)													
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
New Single Family	320	187	145	194	86	57	72	71	104	149	145	126	138
New Two Dwelling	16	23	12	25	0	4	2	9	0	8	22	126	18
New Multi-family	57	51	207	266	102	23	8	95	26	136	322	424	69
Total Units	393	261	364	485	188	84	82	175	130	293	489	676	225
										*As of September 2016			

Bellingham School District

Housing and Population Forecast

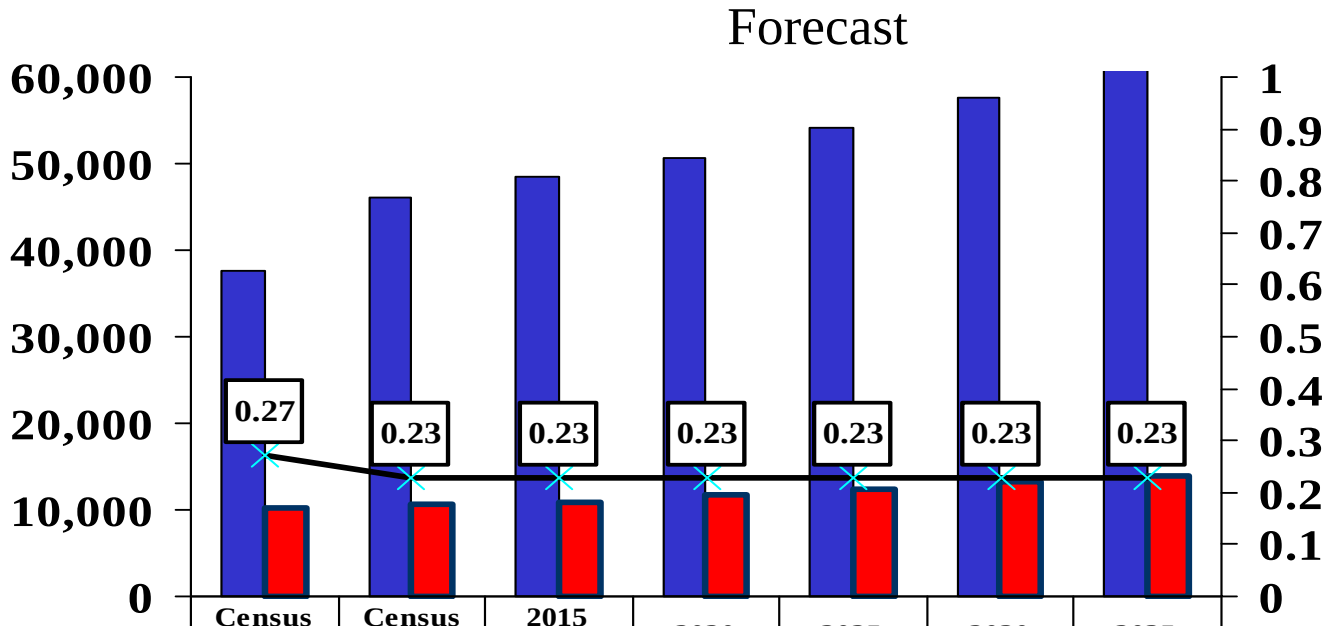
Based on State population forecasts and household size data from the 2010 Census. The population forecast out to 2035 is based on the State medium range forecast for Whatcom County. The estimate of houses is based on dividing the average household size number from the 2010 Census by the projected population totals.



	Census 2000	Census 2010	2020	2025	2030	2035
Housing Units	37,640	46,052	50,652	54,166	57,633	60,860
District Resident Population	85,985	102,121	112,382	120,248	127,944	135,109

A Simple K-12 Forecast For Bellingham Based on the Housing Forecast and the Number of Students per House Using the 2010 Census Estimate

(Assumes 23 public school students per 100 homes, including both new and existing homes)



	Census 2000	Census 2010	2015 Estimate	2020	2025	2030	2035
Housing Units	37,640	46,052	48,452	50,622	54,166	57,633	60,860
K-12 Students	10,228	10,720	10,978	11,643	12,458	13,255	13,998
Total Students Per Household	0.27	0.23	0.23	0.23	0.23	0.23	0.23

Alternative Forecasts

Alternative Forecasts

The previous sections presented two estimates of the future K-12 population in the Bellingham School District. In addition to these estimates we also employed some other methods to predict K-12 enrollment over time. The results of these different forecasts are displayed in the table on page 43. The following is an explanation of the methodology used for each forecast.

6-Year Cohort Survival: This forecast looks at average grade-to-grade growth and the average birth-to-k ratio over the past six years and uses these along with the projection of births to predict future enrollment.

3-Year Cohort Survival: Similar to the five year cohort survival forecast but based on a weighted average of the trends from the past three years. The most recent years are weighted more heavily.

Age 5-19 Trend: Uses the medium range population growth estimate for the Bellingham School District and assumes that the percentage of the population that is school age tracks with projected changes in the percentage of the county population that falls into the Age 5-19 range (using the forecast from the State of Washington). This forecast of the K-12 population is also shown in the chart on page 31.

Alternative Forecasts

Linear Model Using Births and County Population: Uses the forecast of births and the medium range forecast of the District population to predict the total enrollment in Bellingham using the linear correlation between these indicators and total enrollment.

Students Per House Forecast: This forecast assumes that the number of students per house will be similar to the 2010 Census estimate over time. This number is multiplied by the total number of houses projected for the District in specific years in order to yield a forecast estimate of enrollment. A graph of this forecast was previously presented on page 38.

Our final recommended forecast is close to the average of these different estimates but differs due to consideration of how students roll up through the grades and the size of each year's entering kindergarten class and exiting 12th grade class. We are predicting slightly more growth in the near term than the average of the various forecasts. Over the course of the forecast, however, our projection model conforms very closely to the average of the different estimates.

Alternative Forecasts and the Final Forecasts

Summary of the Different Models

The average of all these estimates provides a reasonable prediction of where enrollment might land in the future. In addition, the various models show the range in future enrollment that is possible. Our final model will differ from these estimates because it incorporates the various trends that we see at each grade level and tries to provide a reasonable fit to the average by assuming different rates of growth for the resident population in Bellingham.

The low and high forecasts show what might happen if population growth in Bellingham and the County were to be lower or higher than what we have assumed in our medium range model. These forecasts approximate the growth rates that are assumed in the low and high forecasts from the State for Whatcom County. The lower and higher estimates reflect the uncertainty we encounter when forecasting over an extended period of time. Our preferred medium range forecast conforms to the medium range estimate of the County population (based on the assumption that Bellingham will grow at about the same rate as the overall County). It also reflects the ways in which students roll up through the grades and the size of each year's entering kindergarten and exiting 12th grade class.

Alternative Forecasts of the Bellingham School District Enrollment

	Forecast			
Diiferent Models	***2020***	***2025***	***2030***	***2035***
6 Year Cohort Survival/Birth-to K Ratio	11,512	11,938	12,356	13,021
3 Year Weighted Cohort/Birth-to-K Ratio	11,685	12,259	12,665	13,243
Age 5-19 K-12 Percent of District Follows County Trend	11,469	12,505	13,437	14,196
Linear Model (Births & Bellingham Pop)	11,187	11,482	11,775	12,084
Based on Students Per House (Census Estimate)	11,643	12,458	13,255	13,998
Average	**11,577**	**12,128**	**12,698**	**13,308**
Our Preferred Model	***11,651***	***12,196***	***12,579***	***13,157***

Main Forecasts

Final Forecast Methodology

Births and Kindergarten

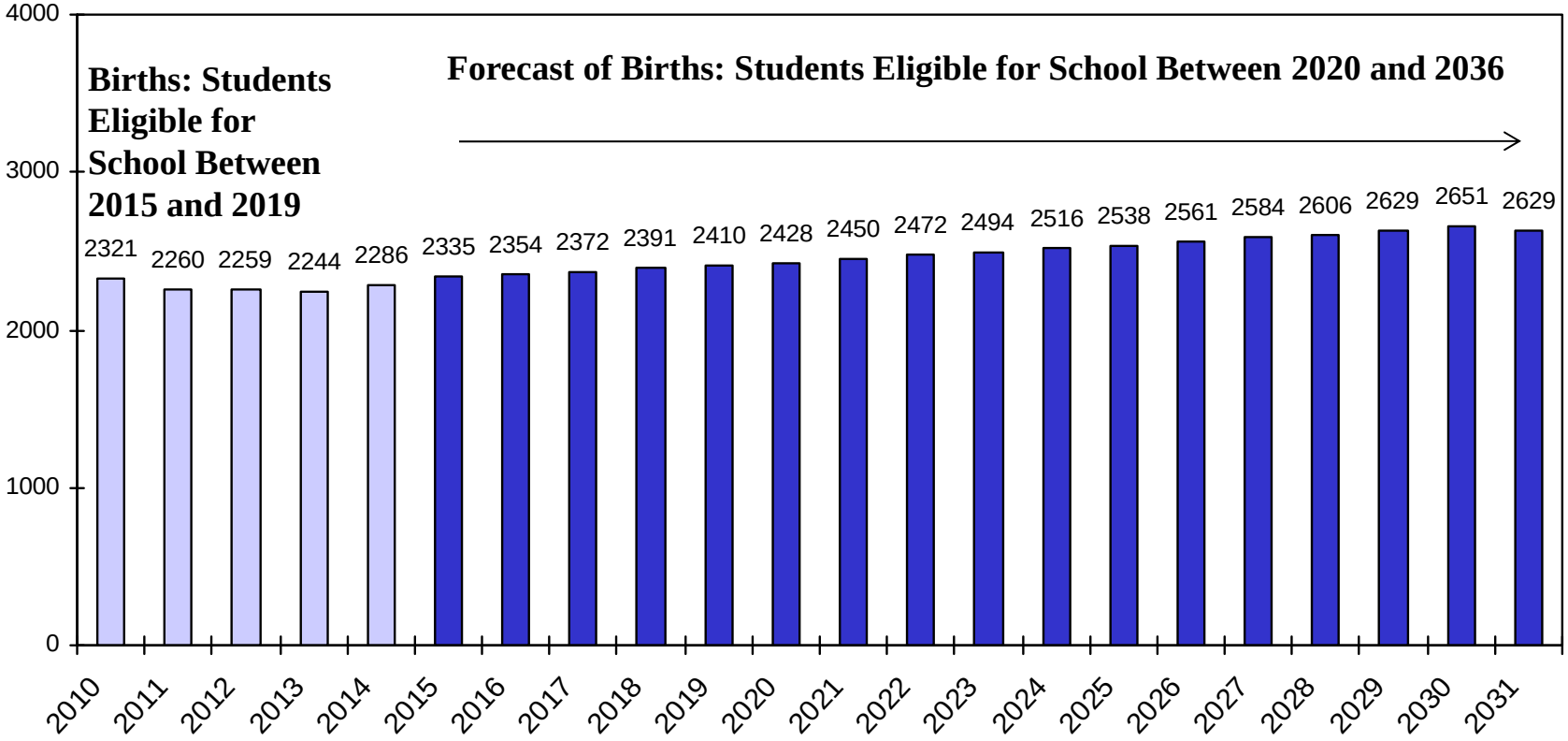
County births were used to project kindergarten. The number of county births is known through 2014 which means we can predict kindergarten enrollment based on actual births out to 2019. Beyond that point births were projected based on the medium range population projections for the county provided by the State of Washington for women in their child bearing ages (15-44 years) and the average of recent fertility rates for this population. The chart on the following page shows the most recent births and the forecast of births for Whatcom County that were used to create the kindergarten forecast.

Kindergarten Projection

Kindergarten enrollments were projected using birth-to-k ratios. The birth-to-k ratio compares the kindergarten enrollment in a given year to births five years prior to that year. The District's birth-to-k ratio has averaged about 36% of county births over the last decade with small fluctuations around that average. The projection model assumes that this percentage will remain relatively constant with some minor adjustments for projected changes in population growth for different periods over the course of the forecast.

Forecast of Whatcom County Births

Based on the Average of Recent Fertility Rates (Washington State Department of Health) and the Medium Range County Forecast of the Number of Women Between the Ages of 15 and 44 for the Forecast Period. (Office of Financial Management for the State of Washington)



Forecast Methodology

Average Grade-to-Grade Growth

Enrollment at the continuing grades was projected using average cohort ratios adjusted for predicted population changes over time. Over the course of a year some families will move out of the District, and others move in. A cohort ratio is a way of summarizing the effect of these changes. By comparing the enrollment at a given grade in a given year (say 3rd grade) to the previous grade enrollment from the previous year (2nd grade) one can get a sense of whether there is a net loss or gain in enrollment as students progress from one grade to the next. A ratio greater than one indicates that more families move in than move out over the course of a year. A ratio less than one indicates that more families move out than move in. Ratios can be averaged over several years to get a sense of how much growth or decline occurs at various grades.

The chart on page 48 shows the three, five, and ten year average cohort ratios by grade level for the Bellingham School District. The 2017 projection in the medium range model is based on a five year average adjusted for predicted gains from new housing using the permit data for the City of Bellingham. For the other years we used the five year ratio adjusted for projected changes in the rate of population growth over time. In all cases we tried to insure that the overall enrollment aligned reasonably well with the average of the alternative estimates presented earlier. We allowed for some variance from these estimates given the long range horizon for the forecast.

Average Grade to Grade Growth

Cohort Ratio Averages for the Bellingham School District

	Birth-to-K Ratio	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
3yr	0.361	1.050	0.986	0.997	1.007	0.997	1.005	1.013	1.000	1.098	0.994	0.952	1.015
5yr	0.363	1.040	0.993	1.001	1.002	1.008	1.014	1.021	1.010	1.122	0.996	0.935	1.000
10 yr	0.362	1.068	0.995	1.013	1.002	1.008	1.009	1.012	1.013	1.155	0.975	0.933	0.975

The Forecasts

Forecast Summary

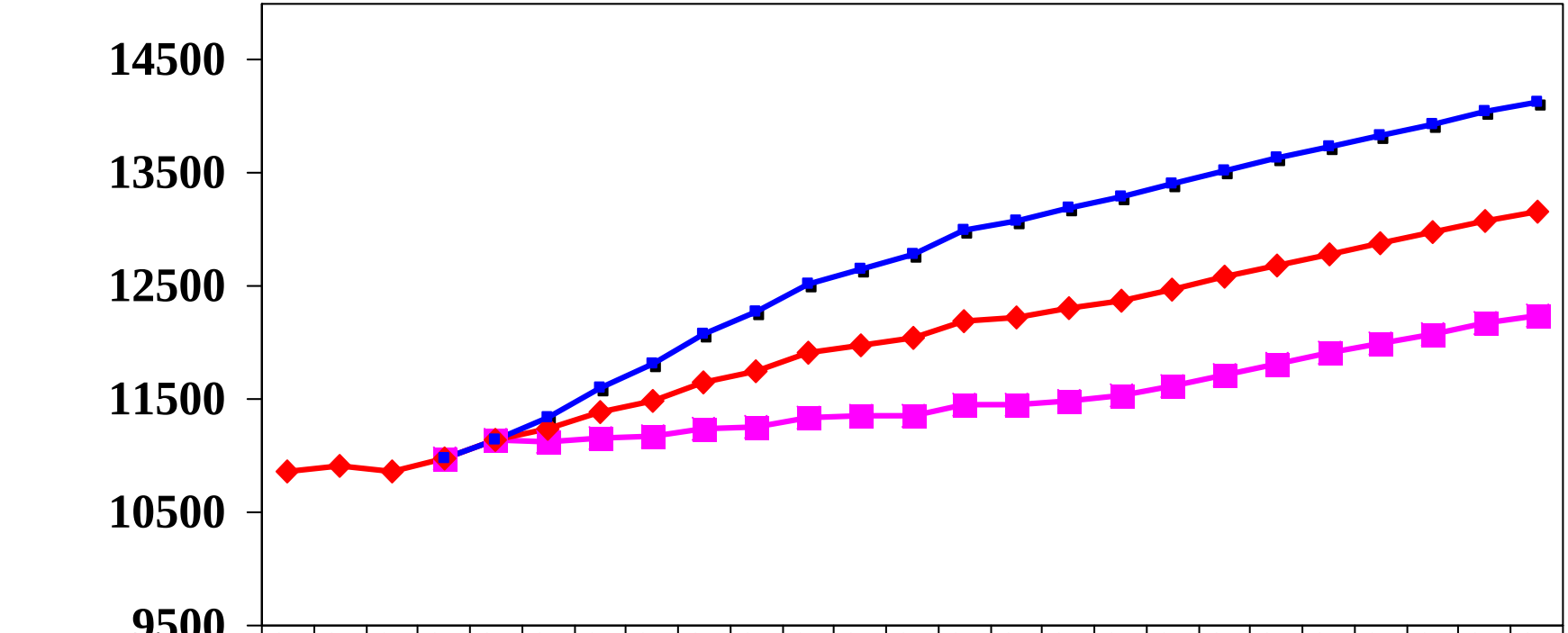
The graph on the following page shows the low, medium, and high range forecasts for the District. Subsequent pages show the enrollment history for the District and the detailed forecasts by grade level for each forecast option. All of the forecasts assume that enrollment will grow over time. They differ mostly in their assumptions regarding the amount of population growth that is likely to occur in the District over the next two decades.

The medium range forecast is recommended at this time and it conforms closely to the average of the alternative forecast estimates presented earlier. The low and high range forecasts show what might happen if population growth in the District were to be lower or higher than what is assumed in the medium range forecast. Although the medium range forecast is recommended at this time, it is important to consider the low and high forecasts as well. Specifically, the District should consider what changes in facilities or other planning might be needed if enrollment were to trend closer to the low or high range numbers.

Compared to the 2015 forecast, the present forecast shows slightly more growth over time. The medium forecast is a best estimate, but it is possible to imagine a number of scenarios in which enrollment exceeds or falls below this trend line for a number of years.

Low, Medium, and High Range Forecasts 2017-2036

Based on Kindergarten Trends, Grade-to-Grade growth and an adjustment for projected future changes in population growth.



	Oct-12	Oct-13	Oct-14	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26	Oct-27	Oct-28	Oct-29	Oct-30	Oct-31	Oct-32	Oct-33	Oct-34	Oct-35	Oct-36
Low Growth				10978	11134	11122	11164	11175	11244	11264	11344	11352	11355	11452	11448	11490	11542	11621	11716	11815	11906	11992	12078	12170	12247
Medium (Recommended)	10868	10920	10859	10978	11134	11234	11383	11492	11651	11754	11913	11982	12040	12196	12230	12302	12376	12471	12579	12687	12787	12879	12975	13073	13157
High Growth				10978	11134	11346	11603	11816	12074	12269	12514	12660	12782	13003	13083	13193	13294	13405	13517	13635	13743	13840	13937	14041	14134

Bellingham Enrollment History (October)

Birth Data						*Birth Data*													
Birth Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
City Births	735	730	719	760	776	906	849	935	883	863	876	851	929	840	953	900	962	1002	991
% of Cohort	93.5%	85.5%	90.8%	87.6%	82.6%	78.8%	89.4%	77.1%	80.5%	83.2%	77.6%	86.5%	86.5%	97.1%	80.5%	95.1%	82.5%	82.8%	83.6%
County Births	1986	1920	1850	1910	1945	2055	1995	2077	1965	1972	2035	2061	2122	2209	2210	2181	2269	2321	2260
% of Cohort	34.6%	32.5%	35.3%	34.9%	33.0%	34.7%	38.0%	34.7%	36.2%	36.4%	33.4%	35.7%	37.9%	36.9%	34.7%	39.2%	35.0%	35.8%	36.0%

	Oct-98	**Oct-99**	**Oct-00**	**Oct-01**	**Oct-02**	**Oct-03**	**Oct-04**	**Oct-05**	**Oct-06**	**Oct-07**	**Oct-08**	**Oct-09**	**Oct-10**	**Oct-11**	**Oct-12**	**Oct-13**	**Oct-14**	**Oct-15**	**Oct-16**
K	687	624	653	666	641	714	759	721	711	718	680	736	804	816	767	856	794	830	828
1	778	757	685	711	771	723	795	818	785	770	796	772	794	849	836	797	888	843	861
2	714	778	767	707	723	772	744	782	822	782	774	778	782	785	847	831	768	886	851
3	773	739	796	756	734	730	765	741	797	850	799	797	776	808	808	840	816	774	880
4	737	769	749	786	757	732	748	761	742	801	840	804	809	771	804	793	837	835	785
5	828	761	789	773	796	773	726	745	773	738	819	842	810	814	776	810	772	844	873
6	773	821	784	806	785	819	785	711	740	812	750	797	845	807	832	772	816	777	877
7	751	774	831	789	814	813	849	794	703	763	828	756	799	828	829	839	784	826	811
8	849	779	829	832	803	827	827	839	820	724	775	842	764	789	848	817	833	791	856
9	949	955	914	957	993	1014	1011	1070	1112	918	861	891	974	878	931	944	891	915	893
10	935	904	881	871	912	924	924	939	956	972	906	875	890	956	881	908	938	892	920
11	787	846	858	829	773	855	872	841	829	892	915	868	799	854	885	830	861	899	805
12	676	662	692	711	751	655	755	685	708	833	851	890	874	752	824	883	861	866	894
Total	**10237**	**10169**	**10228**	**10194**	**10253**	**10351**	**10560**	**10447**	**10498**	**10573**	**10594**	**10648**	**10720**	**10707**	**10868**	**10920**	**10859**	**10978**	**11134**
Change		-68	59	-34	59	98	209	-113	51	75	21	54	72	-13	161	52	-61	119	156
Percent		-0.7%	0.6%	-0.3%	0.6%	1.0%	2.0%	-1.1%	0.5%	0.7%	0.2%	0.5%	0.7%	-0.1%	1.5%	0.5%	-0.6%	1.1%	1.4%
Enrollment by Level																			
K-5	4517	4428	4439	4399	4422	4444	4537	4568	4630	4659	4708	4729	4775	4843	4838	4927	4875	5012	5078
6-8	2373	2374	2444	2427	2402	2459	2461	2344	2263	2299	2353	2395	2408	2424	2509	2428	2433	2394	2544
9-12	3347	3367	3345	3368	3429	3448	3562	3535	3605	3615	3533	3524	3537	3440	3521	3565	3551	3572	3512

Enrollment Forecast (Medium)

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
City Births	*985*	*980*	*972*	*1018*	*1026*	*1034*	*1043*	*1051*	*1059*	*1068*	*1078*	*1088*	*1097*	*1107*	*1117*	*1126*	*1136*	*1146*	*1156*	*1146*

Projected Births

County Births	*2259*	*2244*	*2286*	*2335*	*2354*	*2372*	*2391*	*2410*	*2428*	*2450*	*2472*	*2494*	*2516*	*2538*	*2561*	*2584*	*2606*	*2629*	*2651*	*2629*
% of Cohort	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.4%	36.4%	36.4%	36.4%	36.4%	36.3%	36.3%	36.3%	36.3%	36.3%	36.3%

	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26	Oct-27	Oct-28	Oct-29	Oct-30	Oct-31	Oct-32	Oct-33	Oct-34	Oct-35	Oct-36
K	824	819	834	851	859	866	872	879	886	892	900	908	916	924	931	939	947	955	964	955
1	857	853	848	863	879	887	894	901	908	915	921	929	937	945	953	960	969	977	986	994
2	860	853	849	844	860	876	884	891	898	905	912	918	926	934	941	949	956	965	973	982
3	857	864	856	852	848	865	881	889	896	903	909	916	922	930	937	945	953	960	969	977
4	887	862	868	860	857	854	871	887	895	902	908	915	922	928	935	942	950	958	965	974
5	796	898	872	878	871	868	865	883	899	907	913	919	926	933	938	946	953	961	969	976
6	890	809	913	887	894	888	884	881	900	916	923	929	936	943	949	954	962	969	977	985
7	901	912	829	935	911	919	912	908	905	924	939	946	953	960	966	972	977	986	993	1001
8	824	913	923	840	949	924	932	925	921	917	937	952	959	966	972	978	984	989	998	1005
9	967	928	1027	1039	947	1070	1041	1051	1043	1037	1033	1055	1072	1080	1087	1094	1100	1107	1113	1123
10	894	966	927	1026	1040	948	1071	1042	1052	1043	1037	1033	1055	1072	1079	1086	1093	1099	1106	1112
11	866	840	906	870	965	978	890	1007	980	988	980	974	970	991	1006	1013	1019	1026	1031	1038
12	810	869	843	909	874	970	983	894	1012	984	992	984	978	974	994	1009	1016	1022	1029	1034
Total	**11234**	**11383**	**11492**	**11651**	**11754**	**11913**	**11982**	**12040**	**12196**	**12230**	**12302**	**12376**	**12471**	**12579**	**12687**	**12787**	**12879**	**12975**	**13073**	**13157**
Change	100	149	110	158	104	158	69	58	156	34	71	74	95	108	108	99	92	95	98	84
Percent	0.9%	1.3%	1.0%	1.4%	0.9%	1.3%	0.6%	0.5%	1.3%	0.3%	0.6%	0.6%	0.8%	0.9%	0.9%	0.8%	0.7%	0.7%	0.8%	0.6%
Enrollment by Level																				
K-5	5081	5147	5125	5146	5175	5217	5269	5332	5384	5422	5461	5503	5548	5594	5634	5680	5728	5776	5825	5858
6-8	2616	2634	2665	2661	2754	2731	2728	2714	2726	2756	2798	2826	2847	2868	2887	2904	2923	2944	2968	2991
9-12	3537	3602	3702	3843	3826	3966	3986	3995	4087	4052	4042	4046	4075	4117	4166	4203	4229	4255	4280	4308

Enrollment Forecast (Low)

	Projected Births																			
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
City Births	*985*	*980*	*972*	*1018*	*1026*	*1034*	*1043*	*1051*	*1059*	*1068*	*1078*	*1088*	*1097*	*1107*	*1117*	*1126*	*1136*	*1146*	*1156*	*1146*
	Projected Births																			
County Births	*2259*	*2244*	*2286*	*2335*	*2354*	*2372*	*2391*	*2410*	*2428*	*2450*	*2472*	*2494*	*2516*	*2538*	*2561*	*2584*	*2606*	*2629*	*2651*	*2629*
% of Cohort	36.1%	36.1%	36.1%	36.1%	36.1%	36.1%	36.1%	36.1%	36.1%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%

	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26	Oct-27	Oct-28	Oct-29	Oct-30	Oct-31	Oct-32	Oct-33	Oct-34	Oct-35	Oct-36
K	816	811	826	843	850	857	864	870	877	883	891	899	907	915	921	930	938	946	954	946
1	848	836	830	846	861	869	876	883	890	896	903	910	918	926	935	941	950	958	966	974
2	852	836	824	818	836	851	859	865	872	878	884	891	899	905	913	921	927	936	943	952
3	849	846	831	819	815	832	847	855	861	867	873	879	886	894	900	907	916	921	930	937
4	878	844	842	827	817	813	830	844	852	857	864	870	875	882	889	896	902	911	917	925
5	788	880	845	843	830	820	816	833	847	854	859	866	872	877	883	890	897	903	912	918
6	881	793	886	851	851	837	827	823	840	854	861	866	873	879	883	889	896	903	909	918
7	892	894	804	899	865	865	851	841	836	853	867	874	879	886	892	896	902	909	916	921
8	816	895	896	806	902	869	869	855	845	839	856	870	877	882	888	894	898	904	911	918
9	957	909	997	998	900	1008	970	970	954	942	935	954	970	978	982	989	996	1000	1007	1015
10	885	946	899	986	989	892	999	961	961	944	932	925	944	960	967	971	978	985	989	996
11	858	822	879	835	917	920	831	929	894	894	878	867	861	878	892	899	902	909	915	918
12	802	852	816	873	831	912	915	827	924	889	889	873	862	856	872	886	893	896	903	909
Total	**11122**	**11164**	**11175**	**11244**	**11264**	**11344**	**11352**	**11355**	**11452**	**11448**	**11490**	**11542**	**11621**	**11716**	**11815**	**11906**	**11992**	**12078**	**12170**	**12247**
Change	-12	42	11	69	20	80	8	3	97	-3	42	53	78	95	99	91	85	86	91	77
Percent	-0.1%	0.4%	0.1%	0.6%	0.2%	0.7%	0.1%	0.0%	0.9%	0.0%	0.4%	0.5%	0.7%	0.8%	0.8%	0.8%	0.7%	0.7%	0.8%	0.6%
Enrollment by Level																				
K-5	5030	5053	4998	4996	5009	5041	5091	5149	5197	5234	5273	5314	5356	5399	5440	5484	5529	5574	5622	5653
6-8	2589	2582	2586	2556	2618	2570	2546	2518	2520	2546	2583	2609	2628	2646	2662	2678	2695	2715	2735	2756
9-12	3502	3529	3591	3692	3638	3733	3715	3687	3734	3669	3634	3619	3637	3672	3713	3744	3768	3789	3813	3838

Enrollment Forecast (High)

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
City Births	*985*	*980*	*972*	*1018*	*1026*	*1034*	*1043*	*1051*	*1059*	*1068*	*1078*	*1088*	*1097*	*1107*	*1117*	*1126*	*1136*	*1146*	*1156*	*1146*

Projected Births

County Births	*2259*	*2244*	*2286*	*2335*	*2354*	*2372*	*2391*	*2410*	*2428*	*2450*	*2472*	*2494*	*2516*	*2538*	*2561*	*2584*	*2606*	*2629*	*2651*	*2629*
% of Cohort	36.9%	36.9%	36.9%	36.8%	36.9%	36.9%	36.9%	36.9%	36.9%	36.8%	36.8%	36.8%	36.8%	36.8%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%

	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26	Oct-27	Oct-28	Oct-29	Oct-30	Oct-31	Oct-32	Oct-33	Oct-34	Oct-35	Oct-36
K	832	827	842	860	867	874	881	888	895	901	909	917	926	934	940	948	957	965	973	965
1	865	870	864	880	897	905	912	919	927	933	939	948	956	965	973	980	988	997	1006	1014
2	869	870	875	869	887	903	912	919	926	933	939	945	954	962	970	979	986	993	1002	1011
3	866	880	882	887	883	901	918	926	933	939	947	953	959	968	976	984	992	999	1007	1016
4	896	878	893	896	902	898	917	934	942	948	954	962	968	974	983	991	999	1007	1014	1022
5	804	916	898	913	917	924	920	938	956	963	969	976	984	990	996	1004	1012	1020	1028	1035
6	899	826	941	922	940	943	951	946	965	984	991	997	1003	1011	1017	1023	1031	1039	1047	1057
7	910	931	854	974	956	974	977	986	981	1000	1019	1026	1032	1038	1046	1053	1059	1067	1076	1084
8	832	931	952	873	998	980	999	1002	1010	1004	1023	1043	1051	1057	1062	1070	1077	1083	1091	1100
9	976	946	1059	1083	995	1137	1116	1138	1141	1149	1143	1164	1187	1196	1201	1207	1217	1224	1231	1240
10	903	985	954	1068	1094	1006	1149	1128	1150	1152	1160	1154	1175	1199	1207	1212	1217	1228	1235	1242
11	875	856	933	905	1014	1039	955	1091	1071	1091	1093	1100	1094	1114	1136	1144	1148	1153	1163	1170
12	818	886	867	945	919	1029	1055	969	1107	1086	1106	1108	1115	1109	1129	1151	1159	1163	1168	1178
Total	**11346**	**11603**	**11816**	**12074**	**12269**	**12514**	**12660**	**12782**	**13003**	**13083**	**13193**	**13294**	**13405**	**13517**	**13635**	**13743**	**13840**	**13937**	**14041**	**14134**
Change	212	256	213	258	195	245	146	123	221	79	110	101	110	112	117	109	96	97	104	93
Percent	1.9%	2.3%	1.8%	2.2%	1.6%	2.0%	1.2%	1.0%	1.7%	0.6%	0.8%	0.8%	0.8%	0.8%	0.9%	0.8%	0.7%	0.7%	0.7%	0.7%
Enrollment by Level																				
K-5	5132	5242	5255	5305	5353	5406	5458	5523	5578	5617	5658	5701	5747	5793	5837	5885	5933	5981	6030	6063
6-8	2642	2688	2747	2769	2894	2897	2927	2933	2956	2987	3033	3066	3086	3106	3125	3145	3167	3189	3214	3241
9-12	3572	3673	3813	4000	4022	4211	4274	4326	4469	4478	4502	4527	4572	4618	4672	4713	4740	4767	4797	4830

Medium Range October Headcount Forecast Converted to October FTE Projection

October Enrollment

Headcount Projection

	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26	Oct-27	Oct-28	Oct-29	Oct-30	Oct-31	Oct-32	Oct-33	Oct-34	Oct-35	Oct-36
K	824	819	834	851	859	866	872	879	886	892	900	908	916	924	931	939	947	955	964	955
1	857	853	848	863	879	887	894	901	908	915	921	929	937	945	953	960	969	977	986	994
2	860	853	849	844	860	876	884	891	898	905	912	918	926	934	941	949	956	965	973	982
3	857	864	856	852	848	865	881	889	896	903	909	916	922	930	937	945	953	960	969	977
4	887	862	868	860	857	854	871	887	895	902	908	915	922	928	935	942	950	958	965	974
5	796	898	872	878	871	868	865	883	899	907	913	919	926	933	938	946	953	961	969	976
6	890	809	913	887	894	888	884	881	900	916	923	929	936	943	949	954	962	969	977	985
7	901	912	829	935	911	919	912	908	905	924	939	946	953	960	966	972	977	986	993	1001
8	824	913	923	840	949	924	932	925	921	917	937	952	959	966	972	978	984	989	998	1005
9	967	928	1027	1039	947	1070	1041	1051	1043	1037	1033	1055	1072	1080	1087	1094	1100	1107	1113	1123
10	894	966	927	1026	1040	948	1071	1042	1052	1043	1037	1033	1055	1072	1079	1086	1093	1099	1106	1112
11	866	840	906	870	965	978	890	1007	980	988	980	974	970	991	1006	1013	1019	1026	1031	1038
12	810	869	843	909	874	970	983	894	1012	984	992	984	978	974	994	1009	1016	1022	1029	1034
Total	**11234**	**11383**	**11492**	**11651**	**11754**	**11913**	**11982**	**12040**	**12196**	**12230**	**12302**	**12376**	**12471**	**12579**	**12687**	**12787**	**12879**	**12975**	**13073**	**13157**

FTE Projection

	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26	Oct-27	Oct-28	Oct-29	Oct-30	Oct-31	Oct-32	Oct-33	Oct-34	Oct-35	Oct-36
K	805.6	800.2	815.2	831.9	839.4	846.0	852.7	859.3	866.0	872.1	879.9	887.8	895.6	903.4	909.7	917.7	925.7	933.7	941.8	933.8
1	851.4	847.4	842.5	857.3	873.4	881.2	888.2	895.1	902.0	909.0	914.9	922.8	931.6	939.5	947.4	954.3	963.2	971.1	979.9	987.8
2	854.1	846.6	842.6	837.6	854.2	870.2	878.2	885.2	892.2	898.2	905.2	911.2	919.2	927.2	934.2	942.2	949.1	958.1	966.1	975.0
3	852.3	858.7	850.7	846.8	843.4	860.4	876.4	884.4	891.4	897.5	903.5	910.5	916.5	924.5	931.5	939.5	947.5	954.5	963.4	971.4
4	879.0	853.5	859.5	851.6	849.3	846.3	863.2	879.1	887.1	893.2	899.2	906.1	913.1	919.1	926.1	933.0	941.0	948.9	955.9	964.8
5	788.4	889.4	863.6	869.5	863.3	860.3	857.3	875.2	891.2	898.2	904.2	910.2	917.1	924.1	929.1	937.1	944.1	952.0	960.0	966.9
6	885.7	805.2	908.0	882.1	889.8	883.8	879.8	876.8	895.8	910.9	917.9	923.9	930.9	937.9	943.9	948.9	956.9	963.9	971.9	979.8
7	896.1	906.4	824.6	929.3	905.2	913.2	906.2	902.2	899.2	918.3	933.2	940.2	947.2	954.2	960.2	966.2	971.2	980.2	987.1	995.1
8	818.2	906.3	916.3	833.6	942.1	917.1	925.1	918.1	914.1	910.2	930.2	945.1	952.1	959.1	965.1	971.1	977.1	982.0	991.0	998.0
9	963.9	925.1	1024.1	1036.1	943.9	1067.2	1038.1	1048.1	1040.1	1034.1	1030.1	1052.1	1069.1	1077.1	1084.1	1091.1	1097.1	1104.1	1110.1	1120.1
10	889.5	960.7	921.8	1020.5	1034.6	942.6	1065.5	1036.6	1046.6	1037.5	1031.5	1027.5	1049.5	1066.5	1073.4	1080.4	1087.4	1093.4	1100.3	1106.3
11	782.0	757.9	817.7	785.1	871.0	882.8	803.9	909.1	884.6	891.9	884.6	879.2	875.6	894.6	908.2	914.5	920.0	926.3	930.8	937.2
12	674.6	723.6	701.9	757.0	728.4	807.9	818.8	745.1	843.1	819.7	826.3	819.7	814.6	811.3	828.0	840.6	846.4	851.4	857.3	861.4
Total	**10940.8**	**11081.0**	**11188.3**	**11338.3**	**11437.9**	**11579.1**	**11653.4**	**11714.5**	**11853.4**	**11890.8**	**11960.8**	**12036.3**	**12132.2**	**12238.4**	**12341.0**	**12436.6**	**12526.5**	**12619.6**	**12715.6**	**12797.8**

School Forecasts

School Projections Methodology

- School enrollments were projected for the period from 2017 to 2026. It should be noted that projections beyond a few years are less reliable and should be used with caution.

- At the entry grades (K, 6, and 9) each school's average share of the District's enrollment at the appropriate grade over the past two years was calculated. This percentage was multiplied by the projected District total at each entry grade for subsequent years. These numbers were then adjusted as necessary for projected housing and population growth within each service area.

- At the continuing grades, students were rolled up for each subsequent year based on the average roll up rate of the past two years. Adjustments were then made for projected new housing growth within each school's attendance area. This adjustment was based on data provided by the City of Bellingham and Whatcom County. The data was coded into attendance areas so that we could see which areas have the potential for growth from new housing.

- The original housing data was culled down to exclude student housing for Western Washington, and for projects with a status codes suggesting they were "On hold" or in a preliminary stage of consideration. We also excluded projects that were recently completed. The final file contained plans for about 5,000 units (single family and multi-family). Given the current rate of permitting for the City of Bellingham and the uncertain nature of some of the projects (as noted in the descriptions) we assumed it would take about ten years to complete the pipeline of projects.

School Projections Methodology

- The City of Bellingham has issued an average of 487 residential permits per year over the past three years. The assumption of a ten year timeline for 5,000 units is consistent this average.

- In order to determine how many students might come from new housing we used student generation rate estimates provided by the District. The District rate shows about 32 students every 100 single family units and 11 students for every 100 multi-family units. The assumption in student generation rate analysis is that some housing developments will produce an above average number of students, and others, a number that is below average. But the overall number assumed should be reasonably accurate. Since we have no data on townhomes units that are similar to single family but might have a shared wall, we have treated these developments as single family homes in our analysis.

- The analysis shows where the District might see additional growth from new housing. It is recommended that the District keep track of specific developments, apartments units with multiple bedrooms per unit, or single family developments that might be attractive, for whatever reason, to families with children. In this way the District can be attentive to areas where the present analysis might be underestimating potential growth. We do not have detailed information about the number of bedrooms for apartment complexes, for example, so it is possible that the analysis could be underestimating the potential growth in areas with "family-friendly" apartment dwellings.

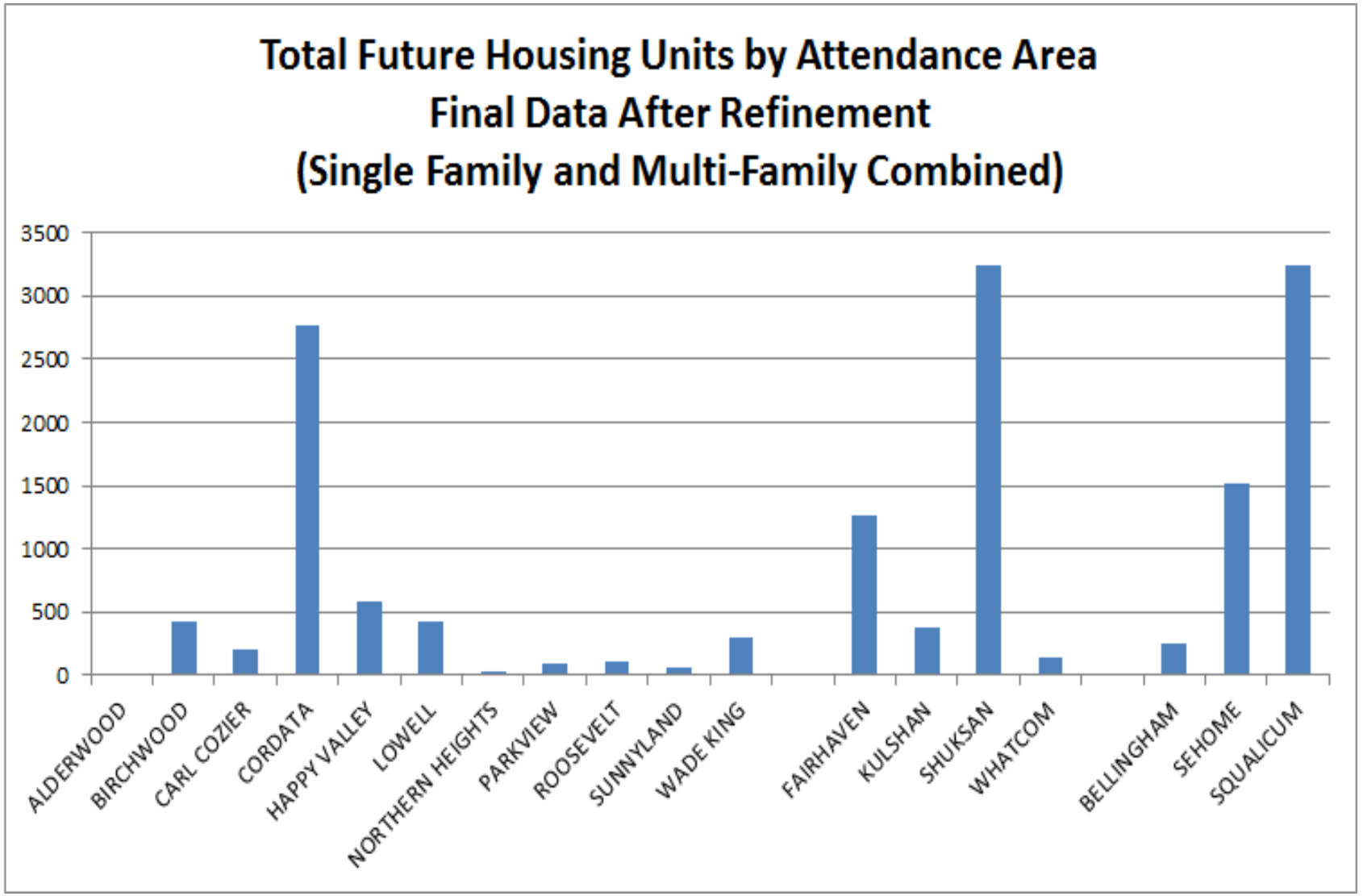
School Projections Methodology

- The final numbers by school were balanced to the medium range District forecast.

- As noted earlier, school projections beyond a few years are subject to much greater error than District projections by grade level primarily because the school numbers are much smaller and trends derived from small numbers are less reliable than those derived from larger numbers. Small changes in enrollment could occur because of random events (a large number of families leaving in a specific year, or two families with multiple siblings leaving all at once) and may not adequately reflect a real trend.

- It is also frequently true that as schools become larger or smaller the sheer size of a school can affect parent decisions about what they want for their child. A school that becomes overcrowded or under-enrolled will sometimes undergo a perception change in which parents decide that the school is no longer appropriate for their child. And this, in turn, can have an effect on future enrollment trends at that school.

- Despite these concerns the school projection numbers should provide adequate guidance in planning. The forecasts in this report reflect current enrollment trends and expected changes in those trends due to population and housing growth over time. Although school enrollments in 2026 may vary from the numbers presented here, the current numbers do reflect where trends are headed and provide the opportunity for the District to make boundary or other adjustments in order to make better use of existing facilities.


Total Future Housing Units by Attendance Area
Final Data After Refinement
(Single Family and Multi-Family Combined)
3500
3000
2500
2000
1500
1000
500
0
ALDERWOOD
BIRCHWOOD
CARL COZIER
CORDATA
HAPPY VALLEY
LOWELL
NORTHERN HEIGHTS
PARKVIEW
ROOSEVELT
SUNNYLAND
WADE KING
FAIRHAVEN
KULSHAN
SHUKSAN
WHATCOM
BELLINGHAM
SEHOME
SQUALICUM

School Service Area Projections

October Projections

Projection Summary by School (October Headcount 2017-2026)

1	Projections											
	OCT15	**OCT16**	**OCT17**	**OCT18**	**OCT19**	**OCT20**	**OCT21**	**OCT22**	**OCT23**	**OCT24**	**OCT25**	**OCT26**
Alderwood	241	228	215	204	197	193	193	195	197	200	201	202
Birchwood	319	318	322	326	342	341	335	344	350	354	359	362
Carl Cozier	247	293	307	326	343	345	355	350	353	356	359	361
Columbia	284	286	296	294	301	307	312	312	314	319	322	325
Cordata	405	427	445	472	488	517	521	534	542	547	551	555
Geneva	436	448	450	456	434	422	415	422	424	431	437	440
Happy Valley	429	422	450	464	475	487	502	501	507	512	517	520
Larrabee												
Lowell	295	304	322	327	319	324	318	315	315	319	323	325
Northern Heights	392	370	366	348	321	309	304	310	314	317	321	324
Parkview	303	294	294	298	301	303	300	307	309	312	315	317
Roosevelt	415	398	384	380	371	365	370	374	377	382	386	389
Silver Beach	452	455	470	500	496	503	513	511	515	521	526	530
Sunnyland	302	288	285	286	285	286	277	287	290	293	297	300
Wade King	430	418	403	394	383	373	387	385	389	394	398	401
	4950	**4949**	**5010**	**5075**	**5055**	**5074**	**5103**	**5145**	**5197**	**5258**	**5309**	**5348**

Note: Numbers may not add to exact totals due to rounding

Projection Summary by School (October Headcount 2017-2026)

2

	Projections											
	OCT15	**OCT16**	**OCT17**	**OCT18**	**OCT19**	**OCT20**	**OCT21**	**OCT22**	**OCT23**	**OCT24**	**OCT25**	**OCT26**
Fairhaven	587	630	665	674	674	673	697	691	690	686	689	697
Kulshan	555	545	553	549	564	563	581	576	576	573	575	582
Shuksan	605	646	650	658	674	676	698	692	691	687	690	698
Whatcom	622	683	719	726	725	723	748	742	742	739	742	750
	2369	**2504**	**2589**	**2607**	**2637**	**2634**	**2725**	**2702**	**2700**	**2686**	**2697**	**2727**

3

	Projections											
	OCT15	**OCT16**	**OCT17**	**OCT18**	**OCT19**	**OCT20**	**OCT21**	**OCT22**	**OCT23**	**OCT24**	**OCT25**	**OCT26**
Bellingham	963	985	1005	1022	1067	1092	1086	1125	1130	1136	1159	1149
Sehome	1099	1079	1103	1139	1151	1204	1196	1239	1246	1250	1277	1267
Squalicum	1285	1230	1245	1249	1292	1346	1341	1389	1396	1401	1431	1418
	3347	**3294**	**3352**	**3410**	**3511**	**3642**	**3624**	**3753**	**3772**	**3787**	**3867**	**3835**

4

	Projections											
	OCT15	**OCT16**	**OCT17**	**OCT18**	**OCT19**	**OCT20**	**OCT21**	**OCT22**	**OCT23**	**OCT24**	**OCT25**	**OCT26**
Alternative	312	327	283	290	289	300	302	312	312	309	323	320

Projection Total (October Headcount 2017-2026)

	OCT15	**OCT16**	**OCT17**	**OCT18**	**OCT19**	**OCT20**	**OCT21**	**OCT22**	**OCT23**	**OCT24**	**OCT25**	**OCT26**
Totals	10978	11074	11234	11383	11492	11651	11754	11913	11982	12040	12196	12230