3-1-2012

Ashland School District: Population and Enrollment Forecasts 2012-13 to 2021-22

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ASHLAND SCHOOL DISTRICT

ENROLLMENT FORECASTS

2012-13 TO 2021-22

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MARCH, 2012

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EXECUTIVE SUMMARY

This report presents the results of a demographic study conducted by the Portland State University Population Research Center. The study includes analyses of population, housing and enrollment trends affecting the Ashland School District (ASD) in recent years, *baseline* forecasts of district-wide enrollment by grade level for the 2012-13 to 2021-22 school years and *baseline* forecasts of individual school enrollments for the 2012-13 to 2021-22 school years. The forecasts are characterized as baseline because they do not include additional residents of other districts who may enroll in ASD schools as a result of the new open enrollment policy.

Fall 2011 K-12 enrollment in all ASD schools was 2,720, 17 students (0.6 percent) less than in Fall 2010. District-wide enrollment is now 844 students (23.7 percent) less than the peak 18 years ago, in the 1993-94 school year. Enrollment losses of more than 100 students each year occurred in 2004-05 and 2005-06. Since 2005-06 the District has experienced relatively stable or slightly increasing K-12 enrollment in three years, and decreasing enrollment the other three years, with a net K-12 enrollment loss of 195 students (6.7 percent) over the six year period.

The enrollment decline has been influenced by three major factors. First is an age structure in which adults age 50 and older outnumber younger adults who are more likely to have young children. Second, those younger adults have fewer children, on average, than the previous generation; the number of births occurring to District residents has declined over the past 20 years despite overall population growth. Finally, the economic downturn has continued for more than three years; job losses have slowed the region's growth, affecting areas such as the ASD that had been experiencing some growth due to new housing development.

Changes in fertility rates are difficult to forecast, and the already low rates dropped even further nationally and in Oregon after the recession began in late 2007. The other two factors, decline in young adult population and job losses, are not likely to persist over the 10 year horizon of the enrollment forecasts included in the current study.

Table 1 contains the Ashland School District's recent and forecast K-12 enrollments by five year intervals under baseline scenario. Chart 1 depicts the District's 10 year K-12 enrollment history

and the three forecast scenarios. Details of the forecasts are presented in the "Enrollment Forecasts" section.

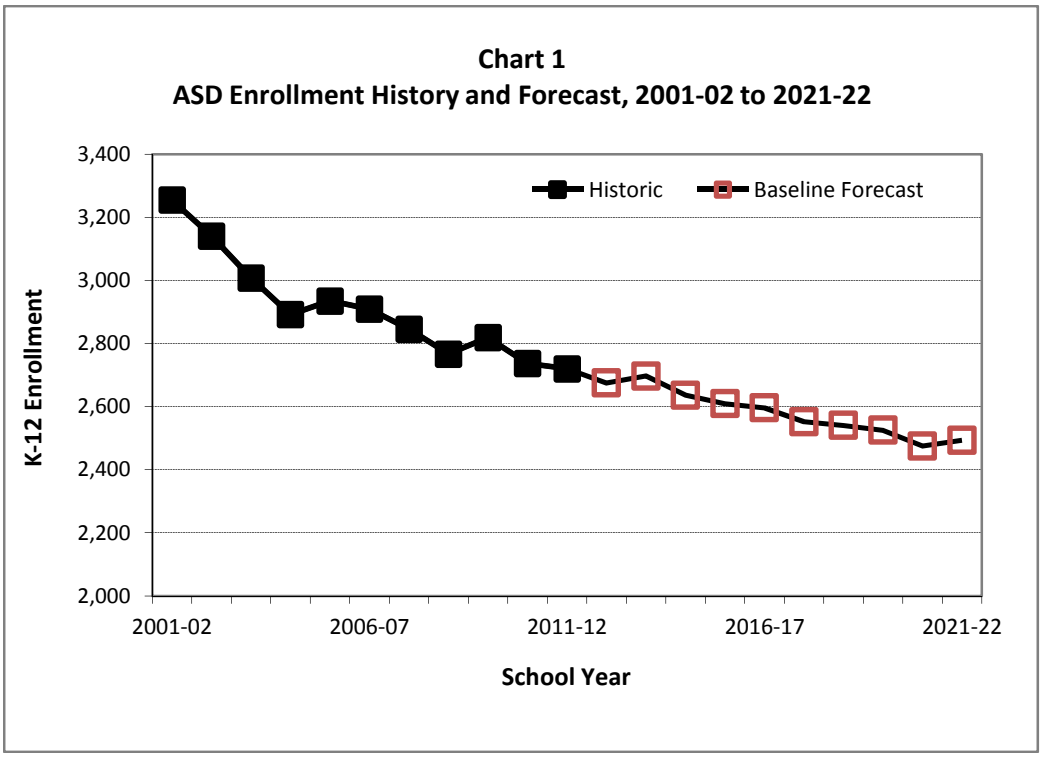
Table 1
Enrollment History and Forecast
Ashland School District

	Actual			Forecast	
	2001-02	**2006-07**	**2011-12**	**2016-17**	**2021-22**
K-5	1,269	1,076	1,056	972	977
5 year change		*-193*	*-20*	*-84*	*5*
6-8	782	678	618	581	551
5 year change		*-104*	*-60*	*-37*	*-30*
9-12	1,204	1,101	1,026	1,023	945
5 year change		*-103*	*-75*	*-3*	*-78*
Total*	**3,255**	**2,909**	**2,720**	**2,596**	**2,493**
5 year change		***-346***	***-189***	***-124***	***-103***

Source: Historic enrollment, Ashland School District; Enrollment forecasts, Population Research Center, PSU, February 2012
**District total includes part-time Willow Wind Students, who are not included in the grade level totals.*

District-wide Enrollment Forecast

In this *baseline* forecast total K-12 enrollment decreases steadily, reaching 2,493 in 2021-22. The District loses 227 students (eight percent) for the entire 10 year period between 2011-12 and 2021-22, less than half of the decline experienced over the past 10 years since 2001-02. Although elementary enrollments have been relatively stable since 2005-06, they are forecast to decline until about 2019 due to the current downturn in births. Secondary enrollments change very little in the first two years of the forecast, and begin to decline in 2014-15.



Individual School Forecasts

Forecasts for individual schools are consistent with the district-wide forecast. Program changes, school choice policies, boundary adjustments, or other decisions about individual schools and the students they serve could impact enrollment in ways that these forecasts do not anticipate. The individual school forecasts depict what future enrollments might be if facilities, programs, and boundaries remain unchanged. The District's new open enrollment policy, whereby students from other districts may apply to attend Ashland schools, may result in greater enrollment than these *baseline* forecasts predict at one or more of Ashland's neighborhood elementary schools, Ashland Middle and High Schools, and Willow Wind's part time program.

Among the District's elementary schools, the least amount of decline occurs at Helman, based on potential residential development. Future housing is also expected to stem the decline at Bellview. Walker, with the least residential capacity, loses the most enrollment. Enrollment losses are likely in the short run because all schools currently have an older age profile (upper grades have larger enrollments than kindergarten and 1st grade).

Enrollment changes at Ashland Middle School depend largely on fluctuations in the size of individual classes advancing from lower grades. Enrollment losses at the middle school are forecasted until the 2021-22 school year.

Ashland High School is forecasted to see its enrollment decrease from 1,024 in the 2011-12 school year to 945 students in 2021-22, losing 79 students (eight percent).

INTRODUCTION

The Portland State University Population Research Center (PRC) has prepared long range enrollment forecasts for the Ashland School District (ASD) based on historic enrollment data through Fall 2011. PRC's previous enrolment forecasts for ASD were prepared in November 2008. This study integrates information about ASD enrollment trends with local area population, housing, and economic trends, and includes forecasts of district-wide enrollment by grade level and total enrollment for individual schools for the period between 2012-13 and 2021-22. Information sources include the U.S. Census Bureau, birth data from the Oregon Center for Health Statistics, geographic shape files from Jackson County, county population forecasts from the Oregon Office of Economic Analysis, employment trends from the Oregon Employment Department, and housing development and planning data from the City of Ashland, Jackson County and the Rogue Valley Council of Governments.

The District serves the City of Ashland and a small population in surrounding unincorporated areas. The ASD encompasses 361 square miles, much of it forested land to the south and east of the city. The 2010 Census shows that 83 percent of the District's population lived within the City of Ashland and the rest (17 percent) lived in unincorporated Jackson County.

Following this introduction are sections presenting recent population, housing, employment, and enrollment trends within the District and the relationship between enrollment and housing. Next are the results of the district-wide enrollment forecasts and individual school forecasts, and a description of the methodologies used to produce the forecasts. The final section contains a brief discussion of the nature and accuracy of forecasts. An appendix contains a five page profile showing the District's population and housing characteristics from the 2000 and 2010 censuses.

POPULATION, EMPLOYMENT, AND HOUSING TRENDS

Between 2000 and 2010, total population within the ASD grew by 2.6 percent, from 23,596 persons to 24,218. This growth rate was less than Jackson County's 12.1 percent growth rate in the decade. Numeric and percentage growth in the ASD as well as Jackson County was smaller in the 2000s than in the 1990s. The share of the District's population living outside of the City of Ashland remained about 17 percent in 2010, as in 2000. From 2000 to 2010, the City of Ashland grew by 2.8 percent. The 1990, 2000, and 2010 populations of the District, the city of Ashland, and the County are shown in Table 2.

Table 2

City and County Population, 1990, 2000, and 2010

				Avg. Annual Growth Rate	
	1990	2000	2010	1990-2000	2000-2010
Ashland S.D. Total*	19,750	23,596	24,218	*1.8%*	*0.4%*
City of Ashland	16,252	19,522	20,078	*1.9%*	*0.4%*
Unincorporated area	*3,498*	*4,074*	*4,140*	*1.5%*	*0.2%*
Jackson County	146,389	181,269	203,206	*2.2%*	*1.6%*

**School District population determined by PSU-PRC based on aggregation of census blocks within the ASD boundary. The 2010 ASD population published by the Census Bureau is 24,282.*

Source: U.S. Census Bureau, 1990, 2000 and 2010 censuses

Employment

The District is part of the larger Rogue Valley area labor market. Nearly half of the ASD's residents work within the District, but there are also a substantial number of residents working outside the district and a similar number of workers commuting from outside the district. Recent data show that, among private sector workers residing in the ASD, 45 percent worked in the City of Ashland and 24 percent worked in the City of Medford. Table 3 reports the number and share of ASD residents by where their jobs are located.[1] Some workers, such as most federal employees, are not included. In some cases the employer's location is used rather than the actual work site. However, the data represent the home to work flow for most workers.

[1]U.S. Census Bureau, LED Origin-Destination Database (2nd quarter 2009). Commute shed report for residents of ASD. Includes workers at firms covered by unemployment insurance (excludes most agricultural jobs and self-employed). http://lehdmap.did.census.gov/.

Table 3

Where Ashland School District Residents are Employed

Job Located Within*	Workers	Share
Jackson County	6,967	81.3%
Ashland S.D.	4,132	48.2%
Ashland City	3,851	45.0%
Medford City	2,045	23.9%
Central Point City	125	1.5%
Phoenix City	112	1.3%
Talent City	96	1.1%
Josephine County	224	2.6%
All other locations	1,376	16.1%
Total Primary Jobs	**8,567**	100.0%

**Note: Indentation indicates that the area is also included within the area above it. For example, workers in the City of Ashland are also counted in Jackson County and in the ASD.*

Sources: US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2009). Jobs covered by unemployment insurance, generally excluding federal government, agricultural, self-employed and domestic workers. Includes at most one (primary) job per resident.

In addition to the 4,132 persons who both live and work within ASD, another 4,965 persons work in the District but live outside of it. Those who commute into the District for their primary job slightly outnumber those who commute out. This pattern is likely to continue in part due to the lower cost of housing in neighboring communities and slower residential growth within Ashland. Table 4 compares median housing values and rent in the five school districts that are home to most workers whose primary job is within the District. The values and rent are self-reported by households responding to the Census Bureau's American Community Survey, and the five years that they span include great variation in the housing market, but Ashland consistently has the highest cost owner-occupied housing.

Between 2000 and 2007 Jackson County added 10,246 jobs, twelve percent over the seven year period. Growth slowed in early 2008, and in October 2008 the county began to post year-to-year job losses. By 2010, employment had fallen below its 2004 level, mainly due to the loss of 9,550 jobs between 2007 and 2010.[2]

[2] "Current Employment by Industry," Oregon Employment Department, OLMIS. Average annual non-farm employment in Jackson County was 83,910 in 2007, 75,640 in 2008, and 74,360 in 2010.

Table 4

Jobs Within ASD: Where Workers Live And Area Median Housing Costs

Resident School District	Primary Job Within CSD	Median Value*		Median Rent*	
		Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Ashland SD	4,132	$417,100	23,385	$824	50
Medford SD	1,662	$270,600	7,915	$789	22
Phoenix-Talent SD	1,147	$237,900	16,333	$826	26
Central Point SD	374	$243,900	6,411	$859	48
Eagle Point SD	251	$242,000	11,955	$902	77
All other locations	1,531	--	--	--	--
Total Primary Jobs	**9,097**	**--**	**--**	**--**	**--**

**Note: Median value, owner-occupied housing units and median contract rent, renter-occupied housing units within the specified district. Estimates are based on survey responses between January 2006 and December 2010, and are adjusted to 2010 dollars.*

Sources: US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2009, see Table 3); U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates, tables B25058 and B25077.

Jackson County's unemployment rate rose from 5.6 percent in 2007 to 12.6 percent in 2010, nearly 2.5 percentage points *above* the U.S. rate. This rate increase of 7 percentage points during that period was similar to the state's other metro areas. This increase in unemployment rate influenced the population growth rate by reducing the migration of residents to the region.

In February 2012, the Oregon Employment Department offered this assessment of Rogue Valley's (Jackson and Josephine County) future employment growth:

> "Highlights in the 2010 to 2020 occupation employment projections include: new and replacement job openings expected to the tune of just over 40,000 during this period; health care occupations will be the fastest growing; and all broad occupational categories are expected to grow. But before we get too carried away with the highlights, it is important to note that employment in 2010 was about 9,000 jobs lower than in 2008, and despite moderate growth between 2010 and 2020, two out of five occupations are expected to have less employment in 2020 that they did in 2008. Even with the 14.4 percent growth rate [projected], getting back to pre-recession levels won't happen in the next decade for many occupations." [3]

[3] "Rogue Valley Trends: Jackson and Josephine Counties." Oregon Employment Department, OLMIS, February, 2012.

The City of Ashland' status as a major cultural area and employment center with a university campus ensures the District's desirability as a residential location. However, growth is limited due to the absence of large tracts of residential land and relatively high housing costs.

Population by Age Group

In contrast with the 1990s when the District's school-age population grew by nine percent, the District's school-age population shrank by 15 percent in the 2000s. The school age (5 to 17) population as a share of the total decreased from 15.3% in 2000 to 12.6% in 2010. In 2000 the largest five year age groups included traditional college age students, led by the age 20 to 24 group. In 2010 there were about 300 fewer residents age 18 to 24 than in 2000, and the leading edge of the baby boom cohort (age 55 to 59 in 2010) became the largest five year age group,

Table 5

Population by Age Group
Ashland School District, 2000 and 2010

			2000 to 2010 Change	
	2000	**2010**	**Number**	**Percent**
Under Age 5	974	860	-114	*-12%*
Age 5 to 9	1,141	1,050	-91	*-8%*
Age 10 to 14	1,472	1,172	-300	*-20%*
Age 15 to 17	1,002	835	-167	*-17%*
Age 18 to 19	1,180	1,043	-137	*-12%*
Age 20 to 24	2,492	2,322	-170	*-7%*
Age 25 to 29	1,387	1,416	29	*2%*
Age 30 to 34	1,104	1,132	28	*3%*
Age 35 to 39	1,175	1,111	-64	*-5%*
Age 40 to 44	1,770	1,202	-568	*-32%*
Age 45 to 49	2,164	1,437	-727	*-34%*
Age 50 to 54	2,035	1,832	-203	*-10%*
Age 55 to 59	1,345	2,326	981	*73%*
Age 60 to 64	887	2,174	1,287	*145%*
Age 65 to 69	806	1,440	634	*79%*
Age 70 to 74	816	931	115	*14%*
Age 75 to 79	761	691	-70	*-9%*
Age 80 to 84	541	568	27	*5%*
Age 85 and over	544	676	132	*24%*
Total Population	**23,596**	**24,218**	**622**	***3%***
Total age 5 to 17	3,615	3,057	-558	*-15%*
share age 5 to 17	*15.3%*	*12.6%*		

Source: U.S. Census Bureau, 2000 and 2010 Censuses; data aggregated to ASD boundary by Portland State University Population Research Center.

outnumbering 20 to 24 year olds by a few persons. The 60 to 64 year old age group ranked third among five year age groups in 2010. In spite of the large university student population, the median age in the District increased from 39.5 in 2000 to 44.9 in 2010. Table 5 shows the population by age group for 2000 and 2010.

Births

Between 2000 and 2010 there has been a decrease in births to residents of the ASD. The decline since 2007 parallels national and state trends. Provisional and preliminary data indicated that birth totals fell more than seven percent in the U.S. and Oregon between 2007 and 2010.[4] The Pew Research Center's analysis of multiple economic and demographic data sources confirms the close correlation between the economic downturn and the nation's fertility downturn.[5] The number of births to ASD residents each year is reported in Table 6. In the "Enrollment Forecasts" section of this report we will examine the relationship between births, migration, and subsequent school enrollments.

Table 6
Annual Births, 2000 to 2010
Ashland School District

Year	Births
2000	185
2001	173
2002	181
2003	174
2004	153
2005	167
2006	151
2007	171
2008	169
2009	160
2010	142

Source: PSU-PRC estimates using Oregon Center for Health Statistics zip code data and geocoded birth records.

[4] "Recent Trends in Births and Fertility Rates Through 2010." NCHS Health E-Stat, June 2011; "Month of Occurrence and County of Residence, Oregon Resident Births, 2010, Preliminary." Oregon Health Authority, Center for Health Statistics, date unknown.

[5] "In a Down Economy, Fewer Births." Pew Research Center, Pew Social & Demographic Trends, October 2011.

Housing Growth and Characteristics

During the 2000 to 2010 period, the District added over 1,500 housing units, as shown in Table 7. The smaller increase of about 1,000 households (occupied housing units) was due to an increase in vacancy rates, from 6.8 percent in 2000 to 10.3 percent in 2010. The census counts units designated "for seasonal, recreational, or occasional use" as vacant, and that category doubled since 2000 and now includes 3.8 percent of the District's housing stock. Vacant units designated "for sale or rent" in 2010 were just 4.0 percent of the District's housing units, an increase from 3.0 percent observed in 2000.

The net decrease of 376 households with children under 18 during the 10 year period from 2000 to 2010 was a reversal from the previous decade which had seen a 311 household increase. The share of households with children fell from 30 percent in 1990 to 27 percent in 2000 and 21 percent in 2010. The average number of persons per household also decreased, from 2.27 in 1990 to 2.20 in 2000 and 2.08 in 2010. Factors contributing to the decreases in household size and share of households with children include the rapid growth in the population age 45 and over and declining fertility rates.

Table 7
Ashland School District
Housing and Household Characteristics, 1990, 2000 and 2010

				Change	
	1990	2000	2010	'90 to '00	'00 to '10
Housing Units	8,726	10,919	12,473	2,193	1,554
Households	8,248	10,177	11,190	1,929	1,013
Households with children under 18	2,458	2,769	2,393	311	-376
share of total	*30%*	*27%*	*21%*		
Households with no children under 18	5,790	7,408	8,797	1,618	1,389
share of total	*70%*	*73%*	*79%*		
Household Population	18,685	22,382	23,243	3,697	861
Persons per Household	2.27	2.20	2.08	-0.07	-0.12

Source: U.S. Census Bureau, 1990, 2000 and 2010 Censuses; data aggregated to ASD boundary by Population Research Center, PSU.

To track recent housing change, we use three sets of data that are consistent with each other but relate to different stages in the development process. First, developers submit land use applications to local jurisdictions in order to subdivide or partition residential land, creating new

tax lots for single family development or to gain site development review for multi-family development. After the land use approvals are attained, building permits are issued, and then homes are built and ultimately appear on the tax rolls. All of these steps create public records.

Updating the inventory of current and proposed development is an ongoing process incorporating information provided by Jackson County and the City of Ashland. The previous report prepared by PRC included tables listing 29 separate developments within ASD that had been submitted for land use approval between 2004 and the October 2008 report date. Since the last report, some of those developments have been completed and several had their approvals withdrawn or expired – likely due to the downturn in the economy. We evaluated currently active developments, including those that were included in the tables in 2008 to assess which developments still have the potential to increase the District's housing stock. The largest of these are both in the Helman attendance area. There were six new homes permitted in Meadowbrook Park in 2011 and more than 50 vacant buildable lots remain. The 52 lot Verde Village development, also in Helman, is on hold due to the economy.

Both publicly and privately sponsored residential development remains difficult due to financing constraints following the nation's housing crisis. Furthermore, when the Ashland Housing Commission approved the 60 unit Snowberry Brook townhomes on Clay Street in 2008, documents cited "One of the most significant difficulties in developing affordable housing in Ashland is finding suitable land. Large properties are not available with the R-2 or R-3 zoning designations making achieving an economy of scale in the production of affordable housing difficult."[6]

Following in chronological order, after subdivision plats are complete and building lots are created, new homes are authorized by building permits. Residential building permit activity within the City of Ashland each of the past 12 years is presented in Table 8. The table shows the slowdown that began in 2006 and has continued through the end of 2011. The Snowberry Brook townhomes completed in early 2011 are not included in the Census Bureau's permit reports because they were publicly financed.

[6] City of Ashland, Housing Commission Communication, May 8, 2008.

Table 8

Housing Units Authorized by Building Permits

	City of Ashland	
Year Permit Issued	Single Family	Multiple Family
2000	208	18
2001	101	55
2002	99	9
2003	125	64
2004	103	55
2005	128	43
2006	47	57
2007	52	11
2008	21	15
2009	25	-
2010	38	-
2011	23	-

Source: City of Ashland, Department of Community Development and U.S. Census Bureau, Residential Construction Branch for 2008-2011 data.Data available online at http://censtats.census.gov/bldg/bldgprmt.shtml

Finally, after homes are completed they appear in tax assessor records. Tax assessor data provided by the Jackson County Geographic Information Systems (GIS) Department — spatially aligned with the District's attendance area boundaries — indicates that during the 11 years from 2000 to 2010, more than 1,220 single family homes were built in the District.

Table 9 reports new single family homes by attendance area and year built. Attendance areas are based on current boundaries. The greatest numbers of new homes have been built in the past decade in the Bellview attendance area, followed by Helman and Walker, respectively. The City of Ashland has accounted for 85 percent of the homes built since 2000, while the Jackson County unincorporated area accounts for all of the rest. Homes that are demolished, removed, or replaced are not subtracted from the number of new homes, so the *net* change in the District's housing stock is lower than the number of new homes.

Table 9
Ashland School District
Single Family Homes Built 2000 to 2010 by Jurisdiction and Attendance Area[1]

A. By Jurisdiction

	Year Built											2000-10
Jurisdiction	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
City of Ashland	173	110	117	134	115	133	85	93	29	15	30	1,034
Unincorporated Area	23	13	34	14	27	14	19	22	10	7	5	188
District Total	**196**	**123**	**151**	**148**	**142**	**147**	**104**	**115**	**39**	**22**	**35**	**1,222**

B. By Elementary Attendance Area

	Year Built											2000-10
Elementary Area[2]	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Bellview	108	58	77	66	51	57	36	19	18	6	12	508
Helman	38	42	49	29	32	48	25	62	13	13	13	364
Walker	50	23	25	53	59	42	43	34	8	3	10	350
District Total	**196**	**123**	**151**	**148**	**142**	**147**	**104**	**115**	**39**	**22**	**35**	**1,222**

1. Includes single family homes and mobile homes on individual parcels. The number of NEW homes shown in this table is greater than the NET change in housing stock, because the table does not account for homes that are demolished or replaced. In particular, in the unincorporated area, new homes are often replacements for previously existing homes.

2. Current (2011-12) attendance areas.

Source: Data compiled by PSU-PRC, using geographic shape files and attribute data from Jackson County, Geographic Information Systems Services, January 2012. Attribute data, including year built and building type, is from the Jackson County Assessor's office.

ENROLLMENT TRENDS

Fall 2011 K-12 enrollment in all ASD schools was 2,720, 17 students (0.6 percent) less than in Fall 2010. District-wide enrollment is now 844 students (23.7 percent) less than the peak 18 years ago, in the 1993-94 school year. Enrollment losses of more than 100 students each year occurred in 2004-05 and 2005-06. Since 2005-06 the District has experienced relatively stable or slightly increasing K-12 enrollment in three years, and decreasing enrollment the other three years, with a net K-12 enrollment loss of 195 students (6.7 percent) over the six year period.

Although all school levels (elementary, middle, and high) have lost enrollment in the past decade, the biggest losses in elementary (K-5th) grades occurred in the 1990s and in the early 2000s. The past six years have seen stable or increasing elementary enrollment, and the District now has more K-5th grade students than in the 2005-06 school year. Middle school (6th-8th) and high school (9th-12th) grades continued to lose students throughout the decade. This year the District's middle grades achieved their first increase in 16 years, with a net gain of 15 students. This year's loss of 16 students in 9th-12th grade marked the 11th decline in the past 12 years.

Table 10 on the next page summarizes the enrollment history for the District by grade level annually from 2001-02 to 2011-12.

Table 10

Ashland School District, Historic Enrollment, 2001-02 to 2011-12

Grade	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
K	198	146	146	149	142	165	180	131	172	151	141
1	192	206	149	150	142	175	178	183	145	179	175
2	191	189	191	153	158	178	190	189	200	152	173
3	207	200	199	189	159	176	182	181	197	205	156
4	239	213	205	197	193	168	183	178	197	189	212
5	242	238	218	200	200	214	178	186	198	200	199
6	243	246	243	218	210	218	222	193	192	203	197
7	274	240	239	240	221	220	219	232	196	193	218
8	265	270	240	228	247	240	223	217	240	207	203
9	297	291	300	298	260	279	272	266	247	270	241
10	298	301	294	292	280	265	272	264	275	254	280
11	313	302	294	280	289	277	256	267	258	270	226
12	296	299	290	298	277	280	264	244	281	248	279
PTE*	0	94	152	152	137	54	27	36	21	16	20
Total	**3,255**	**3,235**	**3,160**	**3,044**	**2,915**	**2,909**	**2,846**	**2,767**	**2,819**	**2,737**	**2,720**
K-5	1,269	1,192	1,108	1,038	994	1,076	1,091	1,048	1,109	1,076	1,056
6-8	782	756	722	686	678	678	664	642	628	603	618
9-12	1,204	1,193	1,178	1,168	1,106	1,101	1,064	1,041	1,061	1,042	1,026

	5 Year Change: 2001-02 to 2006-07		5 Year Change: 2006-07 to 2011-12		10 Year Change: 2001-02 to 2011-12	
	Change	**Pct.**	**Change**	**Pct.**	**Change**	**Pct.**
K-5	-193	*-15%*	-20	*-2%*	-213	*-17%*
6-8	-104	*-13%*	-60	*-9%*	-164	*-21%*
9-12	-103	*-9%*	-75	*-7%*	-178	*-15%*
Total	**-346**	***-11%***	**-189**	***-6%***	**-535**	***-16%***

**Note: Willow Wind part-time equivalency. Willow Wind full-time equivalency is included in grade level figures.*

Source: Ashland School District.

Private School Enrollment and Home Schooling

There are five private schools in the vicinity of the ASD that enroll 100 or more students each. Grace Christian/Cascade Christian High in Medford enrolls about 890 K-12 students, a decline from 2009-10 when it enrolled about 980. Rogue Valley Adventist School, enrolling about 150 students in grades K-12, Sacred Heart Catholic School, enrolling about 272 PK-8 students, and St. Mary's enrolling 446 6^{th}-12^{th} grade students are also in Medford. The Siskiyou School with enrollment of 173 students (1^{st}-8^{th} grade) is the only major private school to be located in Ashland. In addition to these five private schools, there are a few preschools in the vicinity that also offer kindergarten.

Private schools within the ASD enroll local students as well as students from beyond the ASD boundaries; conversely ASD residents attend private schools beyond the District's boundaries, so the number of students enrolled in private schools physically located within the District cannot be used to measure overall private school share. The best estimates of private school enrollment for ASD residents come from the Census Bureau — the 2000 Census "long form" and the more recent American Community Survey (ACS). In the 2000 Census, about eight percent of the K-12 students living in the District and enrolled in school were reported as private school students. Estimates from 2006-2010 ACS responses show an 11 percent share; the ACS sample size is smaller than the census and there is a four percent margin of error at the 90 percent confidence level.[7]

Another difference between public school enrollment and total school age population can be attributed to home schooling. Home schooled students age 7 to 18 living in the District are required to register with the Southern Oregon Educational Service District (SOESD), though the statistics kept by the SOESD are not precise because students who move out of the area are not required to drop their registration. Students who enroll in public schools after being registered as home schooled are dropped from the home school registry. As shown in Table 11, the

[7] Underlying data from U.S. Census Bureau, 2000 Census, Summary File 3, Table P36; U.S. Census Bureau 2006-2010 American Community Survey 5 year estimates, Table B14002, with additional calculations by PSU Population Research Center.

number of registered home school students was about 202 in 2006-07, but fell to 131 in 2011-12. This registry represents about 4.5 percent of the ASD's school age population.

Table 11

Home School Students Residing in ASD[1]

	Total
2001-02[2]	**104**
2006-07[3]	**202**
2011-12[4]	**131**

1. Residents of ASD age 7-18 enrolled with Southern Oregon Education Service District.

2. February 23, 2002.

3. February 20, 2008.

4. February 20, 2012

Source: Southern Oregon Education Service District

Private schools and home schooling help to explain the difference between the number of school-age children living in the District and the number attending District schools. Both represent "outflow" from the District. That is, children eligible but not attending District schools. The other "outflow" consists of District residents who attend public schools in other school districts. There is also a related "inflow" of residents from other districts.

Under Oregon's current inter-district transfer rules, students who want to attend a public school outside of their resident district must gain approval from their home district and the district that they want to attend, and that approval must be renewed each year. In Fall 2011, 93 students attended ASD schools with inter-district transfers, while only 14 ASD residents transferred to schools in other districts, for a net gain to ASD of 79 students. This obviously contributes to ASD's enrollment, but the net gain is somewhat smaller this year than in other recent years. The net gain was 106 students in Fall 2010 and 118 students in Fall 2009. The enrollment decline of 29 students based on net inter-district transfers exceeded the 17 student overall enrollment loss. Therefore, one might conclude that there were a few more ASD residents attending ASD schools in Fall 2011 compared with Fall 2010.

Beginning in the 2012-13 school year, students may transfer without approval of their home district to a district that opens spaces under Oregon's new open enrollment policy. The ASD has decided to adopt the policy and should expect to gain some additional enrollment as a result. Because families have until April 1 to apply, and the number of applicants is unknown at this

time, the enrollment forecasts in this report are based on the current status quo, and do not include additional students from the open enrollment policy.

Neighboring Districts

Table 12 compares several facts about ASD demographic and enrollment trends in comparison to three other neighboring school districts. All four districts have lost enrollment since 2000, though the other three large Jackson County districts have experienced smaller losses than Ashland. The ASD also has the slowest population growth, the smallest school-age population share, and the largest share of its enrollment in high school grades.

Table 12

Selected Jackson County School Districts

Demographic and Enrollment Highlights, 2000 to 2011

	Ashland	Central Point	Medford	Phoenix-Talent
Enrollment growth, **2000-01 to 2005-06**	-10.4%	0.1%	-3.0%	-0.1%
Enrollment growth, **2005-06 to 2011-12**	-6.7%	-2.1%	1.5%	-6.5%
Latino enrollment, **2011-12**	6.5%	11.3%	21.0%	23.3%
Grades 9-12 enrollment, **2011-12**	37.7%	31.8%	31.0%	31.1%
Population growth, **2000 to 2010**	2.6%	19.1%	9.2%	11.3%
Multi-family housing share, **2000**	32.5%	10.8%	24.5%	26.5%
Population age 5 to 17, **2000**	15.3%	19.4%	19.2%	15.9%
Population age 5 to 17, **2010**	12.7%	16.7%	16.9%	14.2%
Population under age 5, **2000**	4.1%	6.0%	6.7%	5.8%
Population under age 5, **2010**	3.6%	6.1%	6.8%	5.3%
Population rural, **2000**	12.9%	36.2%	11.2%	14.6%
Median Household Income **2006-10***	$41,469	$50,241	$44,397	$39,949
Median Household Income -MOE*	$2,537	$2,668	$1,363	$4,385
Median Value of Home **2006-10***	$417,100	$243,900	$270,600	$237,900
Median Value of Home - MOE*	$23,285	$6,411	$7,915	$16,333

Data assembled by Population Research Center, PSU, from several sources: U.S. Census Bureau; OR Dept. of Education; U.S. Dept. of Education. Enrollments may include charter schools and special programs not typically included in District reports.

**U.S. Census Bureau, 2006-2010 American Community Survey 5 Year Estimates. In 2010 Inflation Adjusted Dollars. ACS data needs to be interpreted along with margins of error (MOE).*

Enrollment Trends at Individual Schools

In the six years since Lincoln Elementary school closed in 2005 and new boundaries were drawn, K-5th grade enrollment in the ASD has grown, but the District's three neighborhood elementary schools have had a net loss of 89 students. Bellview has gained enrollment during the period, adding 34 students between 2005-06 and 2011-12. Helman's enrollment has been relatively stable, with a net loss of 14 students since 2005-06. Walker has had a much larger net loss of 109 students since 2005-06.

Ashland Middle School's enrollment is subject to annual fluctuation based on the size of the incoming 6th grade class relative to the previous year's 8th grade class, but it has lost enrollment in eight of the last 10 years. Enrollment grew by seven students in 2011-12 compared with 2010-11, but over the long run enrollment has fallen from 782 students in 2001-02 to 542 students in 2011-12.

John Muir School, a natural science and art magnet school, opened in 2006 and had a Fall 2011 enrollment of 104 students in grades K-8th. Its enrollment is capped at 110 students. Willow Wind is also a popular alternative program which has seen its full-time enrollment increase from 91 in 2006-07 to 154 in 2011-12.

Ashland High School's enrollment has decreased in nine of the last 10 years, with a decline of 16 students in 2010-11 and the same number in 2011-12.

Total enrollments at each of the District's schools from 2001-02 to 2011-12 are shown in Table 12. Enrollment change is calculated for the ten year period.

Table 13
Ashland School District, Historic Enrollment by School, 2001-02 to 2011-12

School	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12		Change 2001-02-2011-12
Bellview	243	217	229	225	278	301	296	273	291	303	312		69
Briscoe	243	216	closed	--	--	--	--	--	--	--	--		-243
Helman	226	223	348	334	305	296	316	295	310	309	291		65
Lincoln	266	258	207	165	closed	--	--	--	--	--	--		-266
Walker	291	278	324	315	382	333	343	333	336	288	273		-18
Elementary Totals[1]	**1,269**	**1,192**	**1,108**	**1,039**	**985**	**1,049**	**1,088**	**1,046**	**1,108**	**1,076**	**1,053**		**-216**
John Muir School (K-8)	--	--	--	--	--	70	95	100	107	103	104		104
Willow Wind (K-8 FTE)	--	--	--	--	20	91	102	104	131	143	154		154
Willow Wind (PTE)[2]	--	94	152	152	137	54	27	36	21	16	20		20
Ashland Middle School	782	756	722	685	707	668	616	588	567	535	542		-240
Middle School Totals[3]	**782**	**756**	**722**	**685**	**707**	**710**	**680**	**647**	**634**	**605**	**623**		**-159**
Ashland High School	**1,204**	**1,193**	**1,178**	**1,168**	**1,106**	**1,096**	**1,051**	**1,038**	**1,056**	**1,040**	**1,024**		**-180**
District Totals	**3,255**	**3,235**	**3,160**	**3,044**	**2,935**	**2,909**	**2,846**	**2,767**	**2,819**	**2,737**	**2,720**		**-535**

1. Includes K-5th grade students at John Muir School and full-time equivalency at Willow Wind.

2. Part-time equivalency at Willow Wind, included in District totals.

3. Includes 6th-8th grade students at John Muir School and full-time equivalency at Willow Wind.

Source: Ashland School District.

ENROLLMENT FORECASTS

District-wide Long-range Forecast Methodology

To ensure that enrollment forecasts are consistent with the dynamics of likely population growth within the District, we combine a grade progression enrollment model with a demographic cohort-component model used to forecast population for the District by age and sex. The components of population change are births, deaths, and migration. Using age-specific fertility rates, age-sex specific mortality rates, age-sex specific migration rates, estimates of recent net migration levels, and forecasts of future migration levels, each component is applied to the base year population in a manner that simulates the actual dynamics of population change.

The 2000 and 2010 Census results are used as a baseline for the population forecasts. By "surviving" the 2000 population and 2000s births (estimating the population in each age group that would survive to the year 2010) and comparing the "survived" population to the actual 2010 population by age group, we are able to estimate the overall level of net migration between 2000 and 2010 as well as net migration by gender and age cohort. The net migration data were used to develop initial net migration rates, forming a baseline for rates used to forecast net migration for the 2010 to 2030 period.

We estimated the number of births to women residing within the District each year from 2000 to 2010, using data from the Oregon Health Authority, Center for Health Statistics. Detailed information including the age of mothers is incorporated in the establishment of fertility rates by age group for both 2000 and 2010. We adjusted the future fertility rates to reflect trends of increasing fertility rates for women age 30 and older. These trends are based on state and national observations, as well as the number of births by age of mother occurring within the District during the 2000 to 2009 period for which detailed birth data was available.

Historic school enrollment is linked to the population forecast in two ways. First, the kindergarten and first grade enrollments at the time of the most recent census (the 2009-2010 school year) are compared to the population at the appropriate ages counted in the census. The "capture rate," or ratio of enrollment to population, is an estimate of the share of area children

who are enrolled in ASD schools. Assumptions for capture rates based on census data are used to bring new kindergarten and first grade students into the District's enrollment. If there is evidence that capture rates have changed since the time of the census, they may be adjusted in the forecast. This forecast maintains capture rates near 80 percent for kindergarten and 82 to 85 percent for first grade, similar to those observed in 2000 and 2010 and consistent with the estimated 11 percent private and four to five percent home school shares.

The other way that historic population and enrollment are linked is through migration. Annual changes in school enrollment by cohort closely follow trends in the net migration of children in the District's population. Once the students are in first grade, a set of baseline rates are used to move students from one grade to the next. These rates, usually 1.00 for elementary grades, represent a scenario under which there is no change due to migration. Enrollment change beyond the baseline is added (or subtracted, if appropriate) at each grade level depending on the migration levels of the overall population by single years of age.

Residential Capacity and Development

Information about residential capacity and current residential developments contribute to the district-wide population and enrollment forecasts and the individual school forecasts. The Greater Bear Creek Valley Regional Plan adopted by the Jackson County Board of Commissioners in November 2011 acknowledged constraints to growth in Ashland including its "independent water supply … some sanitary sewer constraint issues, very steep topography to the west and south, I-5 to the east and limited political support for significant urban growth."[8] Very little of the region's projected population growth was allocated to Ashland, and it was determined that with more efficient use the lands already within Ashland's city limits and urban growth boundary were sufficient to accommodate the anticipated growth for Ashland.

The specific location of residential growth matters most for the individual school forecasts. Permits for 23 new single family homes were issued by the City of Ashland in 2011. About half of the permits were within the Helman boundary, but the pace is too slow to contribute significantly to enrollment in the coming school year. The City of Ashland recently identified

[8] *Greater Bear Creek Valley Regional Plan*. Chapter 2, Regional Growth Planning. Jackson County, 2011.

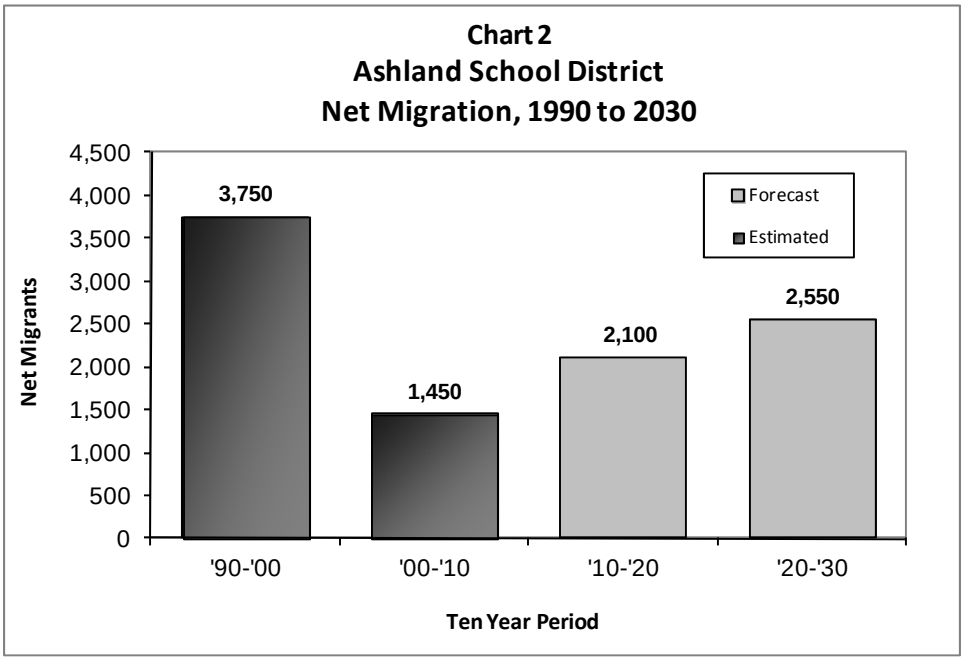
about 500 buildable single family residential parcels within the city.[9] Our informal analysis of parcel data shows that over half of the city's vacant residential parcels are in the Helman attendance area.

The City of Ashland, the Jackson County Housing Authority, and private developers pursue affordable housing development when possible, but recent city, state, and federal priorities have shifted to the preservation of existing affordable housing units. Ashland Housing Program Specialist Linda Reid says, "We're trying to prioritize the preservation of other units that are going to expire. We're running out of centrally located, flat, buildable land."[10]

Population Forecast

Census data confirm that population gains within the District in both the 1990s and the 2000s occurred due to net migration (people moving in minus those moving out) and very small natural increase (births minus deaths).

By "surviving" the 2000 population and 2000s births (estimating the population in each age group that would survive to the year 2010) and comparing the "survived" population to actual



[9] *Buildable Lands Inventory*, approved by the Ashland City Council November 15, 2011.

[10] "Affordable for Whom?" Ashland Daily Tidings, October 10, 2011

2010 population counts by age group, we are able to estimate net migration by age cohort. Under the forecast, net migration is forecast to be somewhat higher than the 2000 to 2010 period. Chart 2 compares historic growth due to net migration estimated for the District with the forecast net migration. Since the 2000 Census, net migration has been larger than population growth due to Ashland's older population and low birth rates. Natural increase, the number of births minus the number of deaths, has been negative. This trend will accelerate throughout the forecast as the large baby boom population ages into higher mortality age ranges.

Birth rates are not expected to decline further, and a recovery from the recession may lead to small increases in today's historically low rates. After 2011 the number of births occurring to District residents is expected to increase slightly. Table 14 shows historic births from 2000 to 2010 as well as forecasts from 2011 until 2016, the period that will have an impact on the enrollment forecasts presented in this study.

Table 14

Estimated and Forecast Births, ASD

Year	Births
2000	185
2001	173
2002	181
2003	174
2004	153
2005	167
2006	151
2007	171
2008	169
2009	160
2010	142
2011 (forecast)	142
2012 (forecast)	158
2013 (forecast)	159
2014 (forecast)	160
2015 (forecast)	161
2016 (forecast)	161

Source: 2000-2010 birth data from Oregon Center for Health Statistics allocated to CSD boundary by PSU-PRC. 2011-2016 forecasts, PSU-PRC.

The 2030 forecast for the ASD is 25,083, an increase of 865 persons from the 2010 Census. The average annual growth rate of 0.2 percent between 2010 and 2030 is less than the rates for the City of Ashland in Jackson County's comprehensive plan and the city's Buildable Lands Inventory, but it incorporates updated 2010 Census data and also includes the unincorporated portion of the District, expected to grow more slowly than the city. Our population forecast is presented by age group in Table 15 and the comparison to other forecasts is provided in Table 16. School-age population (5 to 17) is forecast to continue to decline as a share of total population. Between 2010 and 2030, the greatest numeric and percentage growth occurs among the leading edge of the baby boom, ages 65 to 74 in 2020 and 75 to 84 in 2030.

Table 15

Population by Age Group

Ashland School District, 2000 to 2030

	2000 Census	2010 Census	2020 Forecast	2030 Forecast	2000 to 2030 Change	
					Number	Percent
Under Age 5	974	860	857	846	-14	*-2%*
Age 5 to 9	1,141	1,050	942	956	-94	*-9%*
Age 10 to 14	1,472	1,172	1,106	1,103	-69	*-6%*
Age 15 to 17	1,002	835	738	727	-108	*-13%*
Age 18 to 19	1,180	1,043	1,113	1,154	111	*11%*
Age 20 to 24	2,492	2,322	2,200	2,159	-163	*-7%*
Age 25 to 29	1,387	1,416	1,339	1,428	12	*1%*
Age 30 to 34	1,104	1,132	1,112	1,108	-24	*-2%*
Age 35 to 39	1,175	1,111	1,170	1,137	26	*2%*
Age 40 to 44	1,770	1,202	1,233	1,209	7	*1%*
Age 45 to 49	2,164	1,437	1,357	1,427	-10	*-1%*
Age 50 to 54	2,035	1,832	1,241	1,274	-558	*-30%*
Age 55 to 59	1,345	2,326	1,544	1,459	-867	*-37%*
Age 60 to 64	887	2,174	1,962	1,354	-820	*-38%*
Age 65 to 69	806	1,440	2,316	1,612	172	*12%*
Age 70 to 74	816	931	2,043	1,922	991	*106%*
Age 75 to 79	761	691	1,216	1,875	1,184	*171%*
Age 80 to 84	541	568	653	1,402	834	*147%*
Age 85 and over	544	676	698	931	255	*38%*
Total Population	**23,596**	**24,218**	**24,840**	**25,083**	**865**	***4%***
Total age 5 to 17	3,615	3,057	2,786	2,786	-271	*-9%*
share age 5 to 17	*15.3%*	*12.6%*	*11.2%*	*11.1%*		

	2000-2010	2010-2020	2020-2030
Population Change	**622**	**622**	**243**
Percent	*2.6%*	*2.6%*	*1.0%*
Average Annual	*0.3%*	*0.3%*	*0.1%*

Source: U.S. Census Bureau, 2000 and 2010 Censuses; data aggregated to ASD boundary by Portland State University Population Research Center. PSU-PRC Forecasts, 2020 and 2030.

Table 16

Comparison of Population Growth Rates
Jackson County, City of Ashland, and ASD

Area	Average Annual Growth Rates			
	1990 to 2000 Historic	2000 to 2010 Historic	2010 to 2020 Forecast*	2020 to 2030 Forecast*
Jackson County (OEA)[1]	2.2%	1.4%	1.4%	1.2%
Jackson County[2]	2.2%	1.7%	1.4%	1.2%
City of Ashland[2]	1.9%	0.3%	0.3%	0.3%
City of Ashland[3]	1.9%	0.3%	0.6%	0.8%
Ashland S.D.[4]	1.8%	0.3%	0.3%	0.1%

1. Census data, 1990, 2000, and 2010; growth rates for 2010 to 2030 from "Forecasts of Oregon's County Populations and Components of Change, 2000 to 2040." Oregon Department of Administrative Services, Office of Economic Analysis, April, 2004.

2. Census data, 1990, 2000, and 2010; growth rates for 2010 to 2030 from Table 7, Jackson County Comprehensive Plan, Revised Population Element, adopted by Ordinance #2007-3 on 2/21/07.

3. Census data, 1990, 2000, and 2010; growth rates for 2010 to 2030 from Table 5, Buildable Lands Inventory, City of Ashland, August 2011.

4. Ashland School District Population Forecast, PSU, Population Research Center, February 2012.

District-wide Enrollment Forecast

Chart 3 compares the historic and forecast number of births in the District with the historic and forecast number of ASD kindergarten students under the *baseline* scenario without additional students admitted through the new open enrollment policy. Births correspond to kindergarten cohorts (September to August). Although many children move into and out of the District between birth and age five, and not all District residents attend ASD kindergartens, kindergarten enrollment has remained close to the number of births five years earlier. Because the kindergarten capture rate is close to 80 percent, ratios of kindergarten enrollment to births above 0.80 indicate gains due to positive net migration. Throughout the forecast, net migration between birth and age five contributes to the population of young children within the District.

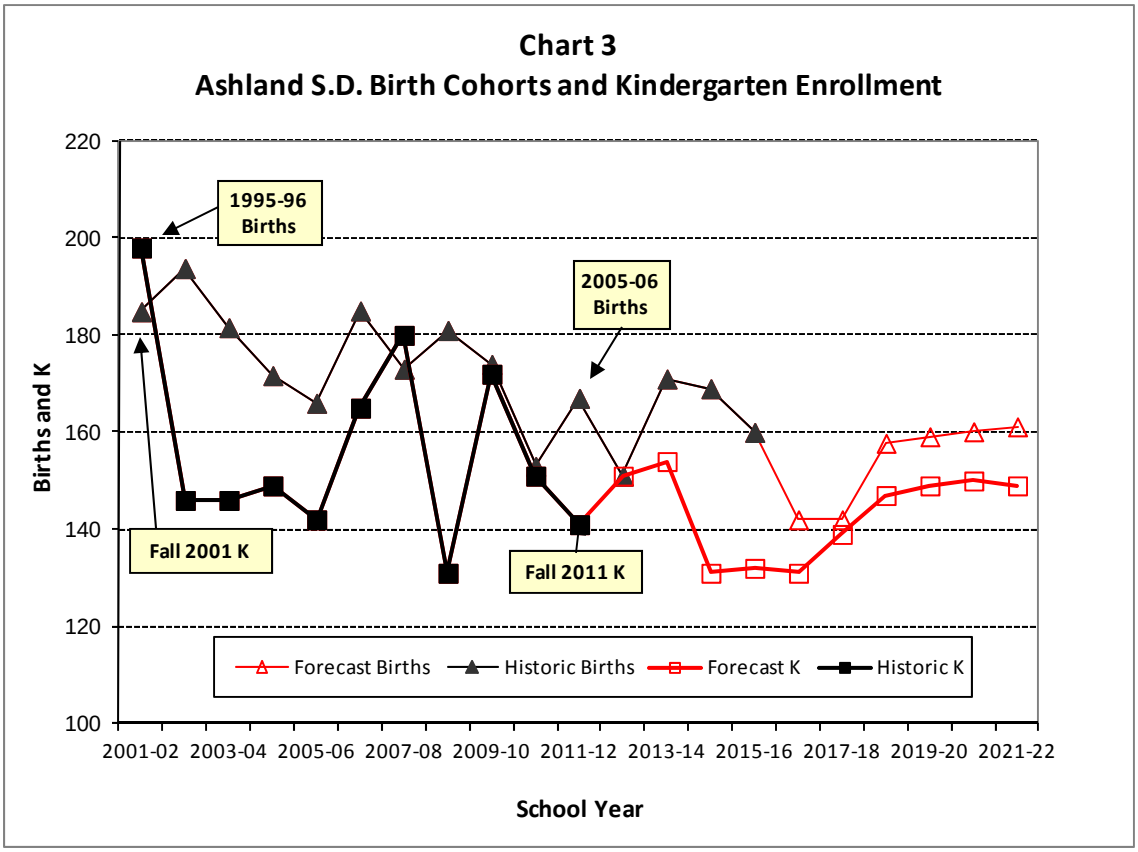


Table 17 displays Grade Progression Rates (GPRs) showing that over the past 10 years the ASD has gained students due to migration at every grade level throughout elementary and middle grades. The GPR is the ratio of enrollment in a specific grade in one year to the enrollment of the same age cohort in the previous year; for example, the number of students enrolled in second grade this year divided by the number of students enrolled in first grade last year. Depending on the school district, rates for some grades are typically high because new students enter the District from private schools at particular grades. It is common to see higher GPRs for the K-1st and 8th-9th grade transitions. In 10th, 11th, or 12th grade, low GPRs can indicate that students are leaving high school or being retained at lower grade levels. Baseline rates are used in the forecast model to move cohorts of students forward one grade prior to applying migration rates. For most elementary grades, if net migration is zero and students are not held back for academic reasons, one can expect baseline GPRs very close to 1.00. In the ASD, transitions from kindergarten to 1st grade, 1st to 2nd grade and 8th to 9th grade have been consistently higher than for other grades, evidence that residents choose ASD schools at those grades. The forecast includes enrollment growth due to migration, at similar rates as in the

past. Again, we stress that this forecast does not include additional students admitted through the new open enrollment policy, so actual GPRs may be higher, especially in 2012-13, the first year that the policy is implemented.

Table 17

Grade Progression Rates[1]

Ashland S.D. Forecast

Grade Transition	Historic Average: 2001-02 to 2011-12	Baseline (without the influence of migration)	Forecast Average: 2012-13 to 2021-22
K-1	1.07	--[2]	1.09
1-2	1.05	1.02	1.05
2-3	1.03	1.00	1.03
3-4	1.02	1.00	1.03
4-5	1.04	1.00	1.03
5-6	1.03	1.00	1.03
6-7	1.02	1.00	1.03
7-8	1.02	1.00	1.03
8-9	1.15	1.12	1.15
9-10	1.00	1.00	1.02
10-11	0.97	0.96	0.98
11-12	0.98	1.00	1.02

1. Ratio of enrollment in an individual grade to enrollment in the previous grade the previous year.

2. The enrollment forecast model uses capture rates for first grade; K-1 baseline GPRs are not used.

In this *baseline* forecast total K-12 enrollment decreases steadily, reaching 2,493 in 2021-22. The District loses 227 students (eight percent) for the entire 10 year period between 2011-12 and 2021-22, less than half of the decline experienced over the past 10 years since 2001-02. Although elementary enrollments have been relatively stable since 2005-06, they are forecast to decline until about 2019 due to the current downturn in births. Secondary enrollments change very little in the first two years of the forecast, and begin to decline in 2014-15. Table 18 contains detailed *baseline* forecasts for the Ashland School District by grade level annually for the 10 year period.

Table 18

Ashland School District Enrollment Forecasts, 2012-13 to 2021-22[1]

	Actual	Forecast									
Grade	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
K	141	151	154	131	132	131	139	147	149	150	149
1	175	155	167	169	144	142	141	150	159	160	161
2	173	183	163	175	178	152	149	148	158	167	168
3	156	178	189	168	180	184	157	154	153	162	172
4	212	160	183	194	173	185	189	162	159	157	166
5	199	217	165	188	199	178	190	194	167	163	161
6	197	204	223	169	193	205	183	195	199	171	167
7	218	202	210	229	173	198	210	188	200	204	175
8	203	223	208	215	235	178	203	216	193	205	209
9	241	232	256	238	246	270	204	233	248	221	234
10	280	246	237	261	243	252	276	209	238	253	225
11	226	274	242	232	256	239	247	271	205	233	248
12	279	230	280	247	237	262	244	253	277	209	238
PT[2]	20	20	20	20	20	20	20	20	20	20	20
Total	**2,720**	**2,675**	**2,697**	**2,636**	**2,609**	**2,596**	**2,552**	**2,540**	**2,525**	**2,475**	**2,493**
K-5	1,056	1,044	1,021	1,025	1,006	972	965	955	945	959	977
6-8	618	629	641	613	601	581	596	599	592	580	551
9-12	1,026	982	1,015	978	982	1,023	971	966	968	916	945

	5 Year Change: 2011-12 to 2016-17		**5 Year Change: 2016-17 to 2021-22**		**10 Year Change: 2011-12 to 2021-22**	
	Change	**Pct.**	**Change**	**Pct.**	**Change**	**Pct.**
K-5	-84	*-8%*	5	*1%*	-79	*-7%*
6-8	-37	*-6%*	-30	*-5%*	-67	*-11%*
9-12	-3	*0%*	-78	*-8%*	-81	*-8%*
Total	**-124**	***-5%***	**-103**	***-4%***	**-227**	***-8%***

1. BASELINE forecast does not include additional students admitted under new open enrollment policy.

2. Part-time Willow Wind students.

Population Research Center, Portland State University, February 2012.

Individual School Forecasts

Forecasts for individual schools are consistent with the district-wide forecast. Program changes, school choice policies, boundary adjustments, or other decisions about individual schools and the students they serve could impact enrollment in ways that these forecasts do not anticipate. The individual school forecasts depict what future enrollments might be if facilities, programs, and boundaries remain unchanged. The District's new open enrollment policy, whereby students from other districts may apply to attend Ashland schools, may result in greater enrollment than these *baseline* forecasts predict at one or more of Ashland's neighborhood elementary schools, Ashland Middle and High Schools, and Willow Wind's part time program.

The methodology relies on unique sets of grade progression rates for each school and the ratio of kindergarten enrollment to lagged births within each school's attendance area. New kindergarten classes are forecast each year based on recent kindergarten enrollments and their relationships to corresponding birth cohorts within their attendance areas. Subsequent grades were forecast using GPRs influenced by district-wide rates, historic observations at individual schools, and future expected housing growth. The final forecasts for individual schools are controlled to match the district-wide forecasts.

Among the District's elementary schools, the least amount of decline occurs at Helman, based on potential residential development. Future housing is also expected to stem the decline at Bellview. Walker, with the least residential capacity, loses the most enrollment. Enrollment losses are likely in the short run because all schools currently have an older age profile (upper grades have larger enrollments than kindergarten and 1st grade).

Enrollment changes at Ashland Middle School depend largely on fluctuations in the size of individual classes advancing from lower grades. Enrollment losses at the middle school are forecasted until the 2021-22 school year.

Ashland High School is forecasted to see its enrollment decrease from 1,024 in the 2011-12 school year to 945 students in 2021-22, losing 79 students (eight percent). Table 19 presents the enrollment forecasts for each school, grouped by school level, and Charts 4, 5, and 6 display the history and forecast by school level in a series of column charts.

Table 19

Enrollment Forecasts for Individual Schools, 2012-13 to 2021-22[1]

	Actual	Forecast										Change
School	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2011-12-2021-22
Bellview	312	309	304	310	309	298	294	288	282	285	289	-23
Helman	291	292	287	282	277	265	263	261	258	264	273	-18
Walker	273	265	258	261	247	236	234	233	233	238	243	-30
Elementary Totals[2]	**1,053**	**1,044**	**1,021**	**1,025**	**1,006**	**972**	**965**	**955**	**945**	**959**	**977**	**-76**
John Muir School (K-8)	104	106	103	104	104	103	105	105	104	103	104	0
Willow Wind (K-8 FT)	154	160	157	157	156	153	152	151	151	151	151	-3
Willow Wind (PT)[3]	20	20	20	20	20	20	20	20	20	20	20	0
Ashland Middle School	542	541	553	524	514	498	513	516	509	498	468	-74
Middle School Totals[4]	**623**	**629**	**641**	**613**	**601**	**581**	**596**	**599**	**592**	**580**	**551**	**-72**
Ashland High School	**1,024**	**982**	**1,015**	**978**	**982**	**1,023**	**971**	**966**	**968**	**916**	**945**	**-79**
District Totals[3]	**2,720**	**2,675**	**2,697**	**2,636**	**2,609**	**2,596**	**2,552**	**2,540**	**2,525**	**2,475**	**2,493**	**-227**

1. BASELINE forecast does not include additional students admitted under new open enrollment policy.

2. Includes K-5th grade students at John Muir School and Willow Wind (full-time).

3. Part-time students at Willow Wind, included in District totals.

4. Includes 6th-8th grade students at John Muir School and Willow Wind (full-time).

Population Research Center, Portland State University, February 2012

Chart 4
ASD Elementary (K-5) Enrollment
2001-02 to 2021-22

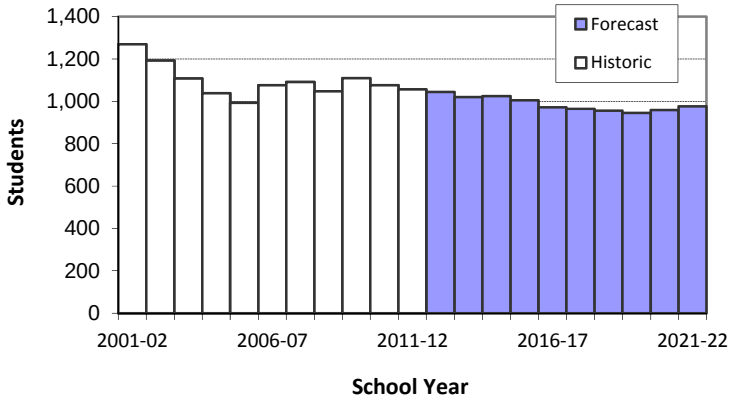


Chart 5
ASD Middle School (6-8) Enrollment
2001-02 to 2021-22

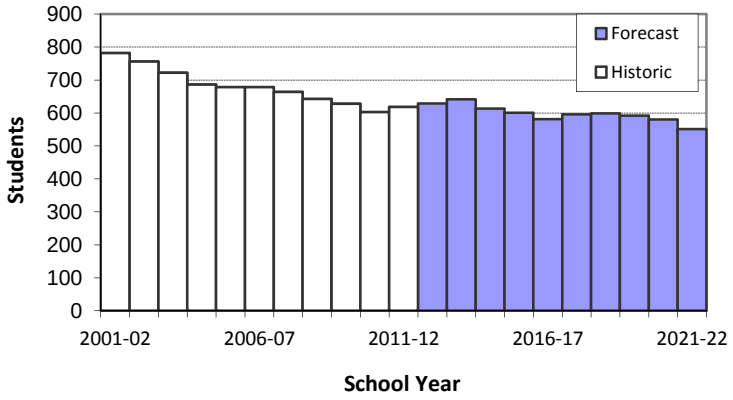
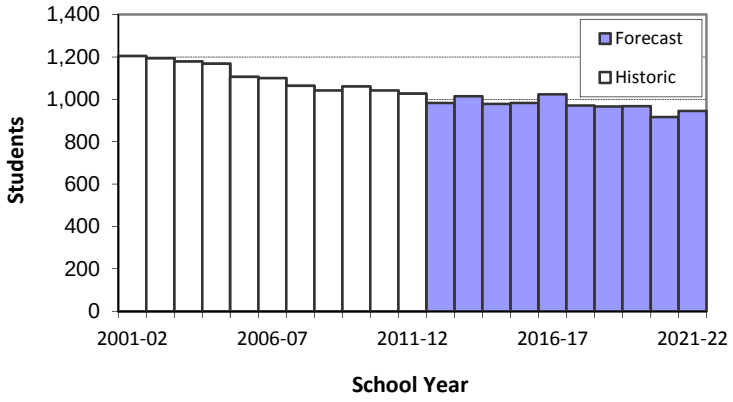


Chart 6
ASD High School (9-12) Enrollment
2001-02 to 2021-22



FORECAST ACCURACY

Forecasts should be understood to represent a range of outcomes even though discrete numbers are provided. Due to the nature of forecasting, there is no way to estimate a confidence interval as one might for data collected from a survey. The best way to measure potential forecast error is to compare actual enrollments with previous forecasts that were conducted using similar data and methodologies.

Table 20 compares actual ASD enrollment by grade level in Fall 2011 with the 2011-12 forecasts prepared in November 2008. For comparability with the forecast, students at Willow Wind are not included in the actual 2011-12 figures. In the current study, Willow Wind students are included in historic and forecast enrollment figures. In Fall 2011, K-12 enrollment was 52 students (2.0 percent) less than the forecast made three years previously. Forecasts made for individual grades ranged from 27 students too high (kindergarten) to 28 students too low (12^{th} grade). Forecasts for six of the 13 grades were within 10 students of actual enrollments. As a measure of average error for individual grade levels, the mean absolute percent error (MAPE) is also included in the table.

Table 20

Fall 2011 Enrollment Compared to November 2008 Forecast By Grade Level

Grade	Actual[1]	Three year forecast[2]		
		Fcst.	Diff.	Error
K	123	150	27	*22.0%*
1	157	159	2	*1.3%*
2	154	175	21	*13.6%*
3	138	145	7	*5.1%*
4	188	188	0	*0.0%*
5	184	202	18	*9.8%*
6	180	195	15	*8.3%*
7	199	190	-9	*-4.5%*
8	199	201	2	*1.0%*
9	239	236	-3	*-1.3%*
10	280	266	-14	*-5.0%*
11	226	240	14	*6.2%*
12	279	251	-28	*-10.0%*
Total	**2,546**	**2,598**	**52**	***2.0%***
MAPE[3]				***6.8%***

1. Ashland S.D. total, excluding Willow Wind for comparability with November 2008 forecast.

2. Forecast for 2011-12 by Population Research Center, November 2008, based on historic enrollment through 2008-09.

3. Mean absolute percent error for individual grades K-12.

APPENDIX A

2000 and 2010 CENSUS PROFILE

2000 and 2010 Census Profile
Ashland School District

Approximation based on census blocks

POPULATION	2000		2010		Change	
SEX AND AGE						
Total population	23,596	*100.0%*	24,218	*100.0%*	622	*2.6%*
Under 5 years	974	*4.1%*	860	*3.6%*	-114	*-11.7%*
5 to 9 years	1,141	*4.8%*	1,050	*4.3%*	-91	*-8.0%*
10 to 14 years	1,472	*6.2%*	1,172	*4.8%*	-300	*-20.4%*
15 to 19 years	2,182	*9.2%*	1,878	*7.8%*	-304	*-13.9%*
20 to 24 years	2,492	*10.6%*	2,322	*9.6%*	-170	*-6.8%*
25 to 29 years	1,387	*5.9%*	1,416	*5.8%*	29	*2.1%*
30 to 34 years	1,104	*4.7%*	1,132	*4.7%*	28	*2.5%*
35 to 39 years	1,175	*5.0%*	1,111	*4.6%*	-64	*-5.4%*
40 to 44 years	1,770	*7.5%*	1,202	*5.0%*	-568	*-32.1%*
45 to 49 years	2,164	*9.2%*	1,437	*5.9%*	-727	*-33.6%*
50 to 54 years	2,035	*8.6%*	1,832	*7.6%*	-203	*-10.0%*
55 to 59 years	1,345	*5.7%*	2,326	*9.6%*	981	*72.9%*
60 to 64 years	887	*3.8%*	2,174	*9.0%*	1,287	*145.1%*
65 to 69 years	806	*3.4%*	1,440	*5.9%*	634	*78.7%*
70 to 74 years	816	*3.5%*	931	*3.8%*	115	*14.1%*
75 to 79 years	761	*3.2%*	691	*2.9%*	-70	*-9.2%*
80 to 84 years	541	*2.3%*	568	*2.3%*	27	*5.0%*
85 years and over	544	*2.3%*	676	*2.8%*	132	*24.3%*
Median age (years)	39.5		44.9		5.4	
Under 18 years	4,589	*19.4%*	3,917	*16.2%*	-672	*-14.6%*
18 to 64 years	15,539	*65.9%*	15,995	*66.0%*	456	*2.9%*
65 years and over	3,468	*14.7%*	4,306	*17.8%*	838	*24.2%*
Male population	11,058	*100.0%*	11,332	*100.0%*	274	*2.5%*
Under 5 years	466	*4.2%*	428	*3.8%*	-38	*-8.2%*
5 to 9 years	587	*5.3%*	499	*4.4%*	-88	*-15.0%*
10 to 14 years	736	*6.7%*	584	*5.2%*	-152	*-20.7%*
15 to 19 years	1,059	*9.6%*	852	*7.5%*	-207	*-19.5%*
20 to 24 years	1,193	*10.8%*	1,155	*10.2%*	-38	*-3.2%*
25 to 29 years	708	*6.4%*	752	*6.6%*	44	*6.2%*
30 to 34 years	534	*4.8%*	536	*4.7%*	2	*0.4%*
35 to 39 years	524	*4.7%*	546	*4.8%*	22	*4.2%*
40 to 44 years	775	*7.0%*	569	*5.0%*	-206	*-26.6%*
45 to 49 years	963	*8.7%*	629	*5.6%*	-334	*-34.7%*
50 to 54 years	966	*8.7%*	771	*6.8%*	-195	*-20.2%*
55 to 59 years	659	*6.0%*	1,046	*9.2%*	387	*58.7%*
60 to 64 years	409	*3.7%*	1,032	*9.1%*	623	*152.3%*
65 to 69 years	395	*3.6%*	700	*6.2%*	305	*77.2%*
70 to 74 years	377	*3.4%*	426	*3.8%*	49	*13.0%*
75 to 79 years	331	*3.0%*	329	*2.9%*	-2	*-0.6%*
80 to 84 years	199	*1.8%*	233	*2.1%*	34	*17.1%*
85 years and over	177	*1.6%*	245	*2.2%*	68	*38.4%*

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.
Tabulated by Population Research Center, Portland State University. www.pdx.edu/prc

2000 and 2010 Census Profile
Ashland School District

Approximation based on census blocks

POPULATION (continued)	2000		2010		Change	
Male population (continued)						
Median age (years)	37.4		42.8		5.4	
Under 18 years	2,299	*20.8%*	1,911	*16.9%*	-388	*-16.9%*
18 to 64 years	7,280	*65.8%*	7,488	*66.1%*	208	*2.9%*
65 years and over	1,479	*13.4%*	1,933	*17.1%*	454	*30.7%*
Female population	12,538	*100.0%*	12,886	*100.0%*	348	*2.8%*
Under 5 years	508	*4.1%*	432	*3.4%*	-76	*-15.0%*
5 to 9 years	554	*4.4%*	551	*4.3%*	-3	*-0.5%*
10 to 14 years	736	*5.9%*	588	*4.6%*	-148	*-20.1%*
15 to 19 years	1,123	*9.0%*	1,026	*8.0%*	-97	*-8.6%*
20 to 24 years	1,299	*10.4%*	1,167	*9.1%*	-132	*-10.2%*
25 to 29 years	679	*5.4%*	664	*5.2%*	-15	*-2.2%*
30 to 34 years	570	*4.5%*	596	*4.6%*	26	*4.6%*
35 to 39 years	651	*5.2%*	565	*4.4%*	-86	*-13.2%*
40 to 44 years	995	*7.9%*	633	*4.9%*	-362	*-36.4%*
45 to 49 years	1,201	*9.6%*	808	*6.3%*	-393	*-32.7%*
50 to 54 years	1,069	*8.5%*	1,061	*8.2%*	-8	*-0.7%*
55 to 59 years	686	*5.5%*	1,280	*9.9%*	594	*86.6%*
60 to 64 years	478	*3.8%*	1,142	*8.9%*	664	*138.9%*
65 to 69 years	411	*3.3%*	740	*5.7%*	329	*80.0%*
70 to 74 years	439	*3.5%*	505	*3.9%*	66	*15.0%*
75 to 79 years	430	*3.4%*	362	*2.8%*	-68	*-15.8%*
80 to 84 years	342	*2.7%*	335	*2.6%*	-7	*-2.0%*
85 years and over	367	*2.9%*	431	*3.3%*	64	*17.4%*
Median age (years)	40.8		46.4		5.6	
Under 18 years	2,290	*18.3%*	2,006	*15.6%*	-284	*-12.4%*
18 to 64 years	8,259	*65.9%*	8,507	*66.0%*	248	*3.0%*
65 years and over	1,989	*15.9%*	2,373	*18.4%*	384	*19.3%*
AREA AND DENSITY						
Land Area - Acres[1]	234,750		231,412			
Persons per acre	0.1		0.1		0.0	*4.1%*
Persons per square mile	64		67		3	*4.1%*
RACE						
Total population	23,596	*100.0%*	24,218	*100.0%*	622	*2.6%*
White alone	21,706	*92.0%*	21,975	*90.7%*	269	*1.2%*
Black or African American alone	132	*0.6%*	244	*1.0%*	112	*84.8%*
American Indian and Alaska Native alone	238	*1.0%*	221	*0.9%*	-17	*-7.1%*
Asian alone	394	*1.7%*	462	*1.9%*	68	*17.3%*
Native Hawaiian and Other Pacific Islander alone	32	*0.1%*	63	*0.3%*	31	*96.9%*
Some Other Race alone	377	*1.6%*	335	*1.4%*	-42	*-11.1%*
Two or More Races	717	*3.0%*	918	*3.8%*	201	*28.0%*

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.
Tabulated by Population Research Center, Portland State University. www.pdx.edu/prc

2000 and 2010 Census Profile
Ashland School District

Approximation based on census blocks

POPULATION (continued)	2000		2010		Change	
RACE (continued)						
Race alone or in combination with one or more other races [2]						
White	22,370	*94.8%*	22,832	*94.3%*	462	*2.1%*
Black or African American	252	*1.1%*	421	*1.7%*	169	*67.1%*
American Indian and Alaska Native	526	*2.2%*	642	*2.7%*	116	*22.1%*
Asian	589	*2.5%*	763	*3.2%*	174	*29.5%*
Native Hawaiian and Other Pacific Islander	91	*0.4%*	154	*0.6%*	63	*69.2%*
Some Other Race	562	*2.4%*	432	*1.8%*	-130	*-23.1%*
HISPANIC OR LATINO AND RACE						
Total population	23,596	*100.0%*	24,218	*100.0%*	622	*2.6%*
Hispanic or Latino	803	*3.4%*	1,200	*5.0%*	397	*49.4%*
Not Hispanic or Latino	22,793	*96.6%*	23,018	*95.0%*	225	*1.0%*
White alone	21,339	*90.4%*	21,294	*87.9%*	-45	*-0.2%*
Black or African American alone	124	*0.5%*	230	*0.9%*	106	*85.5%*
American Indian and Alaska Native alone	227	*1.0%*	184	*0.8%*	-43	*-18.9%*
Asian alone	388	*1.6%*	452	*1.9%*	64	*16.5%*
Native Hawaiian and Other Pacific Islander alone	28	*0.1%*	60	*0.2%*	32	*114.3%*
Some Other Race alone	79	*0.3%*	42	*0.2%*	-37	*-46.8%*
Two or More Races	608	*2.6%*	756	*3.1%*	148	*24.3%*
RELATIONSHIP						
Total population	23,596	*100.0%*	24,218	*100.0%*	622	*2.6%*
In households	22,382	*94.9%*	23,243	*96.0%*	861	*3.8%*
In family households	16,038	*68.0%*	15,656	*64.6%*	-382	*-2.4%*
Householder	5,596	*23.7%*	5,647	*23.3%*	51	*0.9%*
Spouse [3]	4,129	*17.5%*	4,123	*17.0%*	-6	*-0.1%*
Child	5,205	*22.1%*	4,681	*19.3%*	-524	*-10.1%*
Own child under 18 years	4,317	*18.3%*	3,622	*15.0%*	-695	*-16.1%*
Other relatives	515	*2.2%*	580	*2.4%*	65	*12.6%*
Nonrelatives	593	*2.5%*	625	*2.6%*	32	*5.4%*
In nonfamily households	6,344	*26.9%*	7,587	*31.3%*	1,243	*19.6%*
Householder	4,581	*19.4%*	5,543	*22.9%*	962	*21.0%*
Nonrelatives	1,763	*7.5%*	2,044	*8.4%*	281	*15.9%*
Population under 18 in households	4,559	*99.3%*	3,908	*99.8%*	-651	*-14.3%*
Population 18 to 64 in households	14,587	*93.9%*	15,102	*94.4%*	515	*3.5%*
Population 65 and over in households	3,236	*93.3%*	4,233	*98.3%*	997	*30.8%*
In group quarters	1,214	*5.1%*	975	*4.0%*	-239	*-19.7%*

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.
Tabulated by Population Research Center, Portland State University. www.pdx.edu/prc

2000 and 2010 Census Profile
Ashland School District

Approximation based on census blocks

POPULATION (continued)	2000		2010		Change	
GROUP QUARTERS						
Total group quarters population	1,214	*100.0%*	975	*100.0%*	-239	*-19.7%*
Institutionalized population	112	*9.2%*	67	*6.9%*	-45	*-40.2%*
Male	33	*2.7%*	28	*2.9%*	-5	*-15.2%*
Female	79	*6.5%*	39	*4.0%*	-40	*-50.6%*
Noninstitutionalized population	1,102	*90.8%*	908	*93.1%*	-194	*-17.6%*
Male	505	*41.6%*	423	*43.4%*	-82	*-16.2%*
Female	597	*49.2%*	485	*49.7%*	-112	*-18.8%*
Population under 18 in group quarters	30	*0.7%*	9	*0.2%*	-21	*-70.0%*
Population 18 to 64 in group quarters	952	*6.1%*	893	*5.6%*	-59	*-6.2%*
Population 65 and over in group quarters	232	*6.7%*	73	*1.7%*	-159	*-68.5%*

HOUSEHOLDS	2000		2010		Change	
Total households	10,177	*100.0%*	11,190	*100.0%*	1,013	*10.0%*
Family households (families)[4]	5,596	*55.0%*	5,647	*50.5%*	51	*0.9%*
With own children under 18 years	2,636	*25.9%*	2,231	*19.9%*	-405	*-15.4%*
Husband-wife family	4,129	*40.6%*	4,123	*36.8%*	-6	*-0.1%*
With own children under 18 years	1,611	*15.8%*	1,254	*11.2%*	-357	*-22.2%*
Male householder, no wife present	347	*3.4%*	420	*3.8%*	73	*21.0%*
With own children under 18 years	229	*2.3%*	255	*2.3%*	26	*11.4%*
Female householder, no husband present	1,120	*11.0%*	1,104	*9.9%*	-16	*-1.4%*
With own children under 18 years	796	*7.8%*	722	*6.5%*	-74	*-9.3%*
Nonfamily households[4]	4,581	*45.0%*	5,543	*49.5%*	962	*21.0%*
Householder living alone	3,225	*31.7%*	4,052	*36.2%*	827	*25.6%*
Male	1,301	*12.8%*	1,623	*14.5%*	322	*24.8%*
65 years and over	279	*2.7%*	428	*3.8%*	149	*53.4%*
Female	1,924	*18.9%*	2,429	*21.7%*	505	*26.2%*
65 years and over	785	*7.7%*	1,003	*9.0%*	218	*27.8%*
Households with individuals under 18 years	2,769	*27.2%*	2,393	*21.4%*	-376	*-13.6%*
Households with individuals 65 years and over	2,425	*23.8%*	3,222	*28.8%*	797	*32.9%*
Average household size	2.20		2.08		-0.12	*-5.6%*
Average family size[4]	2.76		2.66		-0.10	*-3.6%*

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.
Tabulated by Population Research Center, Portland State University.

www.pdx.edu/prc

2000 and 2010 Census Profile
Ashland School District

Approximation based on census blocks

HOUSING UNITS	2000		2010		Change	
Total housing units	10,919	*100.0%*	12,473	*100.0%*	1,554	*14.2%*
Occupied housing units	10,177	*93.2%*	11,190	*89.7%*	1,013	*10.0%*
Owner occupied[5]	5,752	*56.5%*	6,259	*55.9%*	507	*8.8%*
Owned with a mortgage or a loan	N/A		3,939	*62.9%*		
Owned free and clear	N/A		2,320	*37.1%*		
Renter occupied	4,425	*43.5%*	4,931	*44.1%*	506	*11.4%*
Vacant housing units[6]	742	*6.8%*	1,283	*10.3%*	541	*72.9%*
For rent	244	*32.9%*	341	*26.6%*	97	*39.8%*
For sale only	89	*12.0%*	158	*12.3%*	69	*77.5%*
Rented or sold, not occupied	58	*7.8%*	106	*8.3%*	48	*82.8%*
For seasonal, recreational, or occasional use	243	*32.7%*	478	*37.3%*	235	*96.7%*
For migrant workers	2	*0.3%*	0	*0.0%*	-2	*-100.0%*
All other vacants	106	*14.3%*	200	*15.6%*	94	*88.7%*
Owner-occupied housing units	5,752	*56.5%*	6,259	*55.9%*	507	*8.8%*
Population in owner-occupied housing units	13,551		13,497		-54	*-0.4%*
Average household size of owner-occupied units	2.36		2.16		-0.20	*-8.5%*
Renter-occupied housing units	4,425	*43.5%*	4,931	*44.1%*	506	*11.4%*
Population in renter-occupied housing units	8,831		9,746		915	*10.4%*
Average household size of renter-occupied units	2.00		1.98		-0.02	*-1.0%*

1. Land area of the census blocks that approximate the area. The same boundaries were used for both 2000 and 2010; any differences in land area between 2000 and 2010 reflect changes to census block geography.

2. In combination with one or more of the other races listed. The six numbers may add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race.

3. "Spouse" represents spouse of the householder. It does not reflect all spouses in a household. Responses of "same-sex spouse" were edited during processing to "unmarried partner."

4. "Family households" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples even if the marriage was performed in a state issuing marriage certificates for same-sex couples unless there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households. "Nonfamily households" consist of people living alone and households which do not have any members related to the householder.

5. Percentage distribution of ownership categories ("owned with a mortgage or a loan" and "owned free and clear") adds to 100 percent.

6. Percentage distribution of vacancy categories ("for rent," etc.) adds to 100 percent.

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.
Tabulated by Population Research Center, Portland State University. www.pdx.edu/prc