MCMINNVILLE SCHOOL DISTRICT

ENROLLMENT FORECASTS

2017-18 TO 2026-27

Portland State
Population Research Center

MARCH, 2017

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Prepared By

Population Research Center

Portland State University

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Project Staff:

Charles Rynerson, Research Associate

Xi Yang, Graduate Research Associate

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EXECUTIVE SUMMARY

This report presents the results of a demographic study conducted by the Portland State University Population Research Center (PRC) for the McMinnville School District (MSD). The study includes analysis of population, housing and enrollment trends affecting the District in recent years and forecasts of district-wide enrollments for a ten year period from 2017-18 to 2026-27 and of individual schools for a five year period from 2017-18 to 2021-22.

District-wide Enrollment Trends

- The McMinnville School District (MSD) enrolled 6,794 students in fall 2016, an increase of 60 students (0.9 percent) from the fall 2015 K-12 total of 6,734.

- This was the fourth consecutive K-12 enrollment increase; since 2013-14 a new record for district-wide enrollment has been set each year.

- Elementary (grades K-5) enrollment of 3,110 is also a new peak, in spite of incoming kindergarten classes in each of the most recent three years having fewer students than in each of the previous three years from 2011-12 to 2013-14.

- Middle school (grades 6-8) enrollment of 1,487 was the lowest in 10 years due to relatively small cohorts currently in the three grades comprising middle school.

- High school (grades 9-12) enrollment has experienced four consecutive years of growth; the fall 2016 total of 2,197 is an increase of 88 students from fall 2015.

District-wide Population Forecast

- Our forecast for 2020 population in the MSD is 46,294, an increase of 6,160 persons from the 2010 Census (1.4 percent average annual growth rate, or AAGR).

- School-age population (5 to 17) is forecast to increase by 525 persons, a slower rate (0.7 percent AAGR) than overall population growth.

- In the 2020 to 2030 period, the MSD grows by another 7,257 persons (1.5 percent AAGR), including a 546 person (0.7 percent AAGR) increase in school age population.

District-wide Enrollment Forecast

- The forecast includes growth due to net in-migration, but smaller kindergarten cohorts resulting from a downturn in births will result in relatively slow overall enrollment growth.

- Elementary enrollment is expected to decline by 156 students (five percent) between 2016-17 and 2020-21. After 2020-21, elementary growth resumes, adding 229 students (eight percent) in six years. Elementary enrollment does not recover to its current (2016-17) level until 2025-26.

- Middle school enrollments grow by 250 students (17 percent) in the first four years between 2016-17 and 2020-21, and then decline as the smaller birth cohorts reach 6th grade, but remain above their current (2016-17) level throughout the forecast.

- High school enrollment remains relatively stable during the first four years of the forecast and then grows by 259 students (12 percent) between 2020-21 and 2023-24, reaching a peak of 2,445 in 2023-24 before falling by 183 students (seven percent) to 2,262 in 2026-27.

Table 1 compares the historic and forecast growth for the District by five year increment. Chart 1 depicts the District's 10 year K-12 enrollment history and forecast. More detailed forecasts for the District may be found in Table 13 on page 29 of this report.

Table 14 on page 31 of this report presents the enrollment forecasts for each school, grouped by school level (elementary, middle, and high).

Table 1
Historic and Forecast Enrollment
McMinnville School District

	Historic			Forecast	
	2006-07	**2011-12**	**2016-17**	**2021-22**	**2026-27**
District Total	**6,332**	**6,490**	**6,794**	**6,953**	**7,025**
5 year change		*158*	*304*	*159*	*72*
		2%	*5%*	*2%*	*1%*
K-5	2,949	2,948	3,110	2,990	3,183
5 year change		*-1*	*162*	*-120*	*193*
		0%	*5%*	*-4%*	*6%*
6-8	1,476	1,539	1,487	1,662	1,580
5 year change		*63*	*-52*	*175*	*-82*
		4%	*-3%*	*12%*	*-5%*
9-12	1,907	2,003	2,197	2,301	2,262
5 year change		*96*	*194*	*104*	*-39*
		5%	*10%*	*5%*	*-2%*

Population Research Center, PSU. February 2017.

Chart 1
McMinnville S.D. K-12 Enrollment History and Forecast
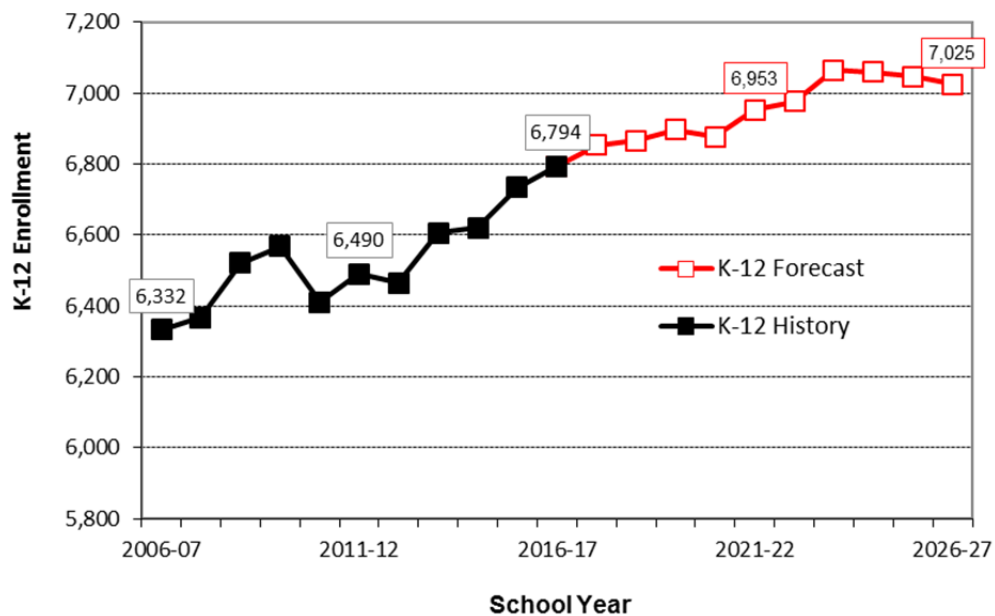
INTRODUCTION

The McMinnville School District (MSD) requested that the Portland State University Population Research Center (PRC) prepare enrollment forecasts for use in the District's long-range planning. The current study integrates information about MSD and updates the work PRC conducted in 2015, providing a snapshot of demographic, housing, and school enrollment patterns and trends. District-wide forecasts are presented for a ten year period from 2017-18 to 2026-27 and individual school forecasts for a five year period from 2017-18 to 2021-22.

In the next few sections, overviews of the local area population, housing and economic trends, and MSD enrollment history will be presented. Next, the methodology for the district-wide and individual school enrollment forecasts will be described; followed by the forecast results. The final section contains a brief discussion of the nature and accuracy of forecasts.

The District has about 42,000 residents including the Cities of McMinnville and Lafayette in Yamhill County as well as unincorporated areas surrounding McMinnville. The City of McMinnville accounted for 80.2 percent and the City of Lafayette accounted for 9.3 percent of the district's population in 2010. The District is located entirely within Yamhill County.

A wide range of information specific to the district and its surrounding area was gathered for use in this demographic study. Data sources include: enrollment information from the MSD, demographic and housing data from the U.S. Census Bureau, birth data from the Oregon Center for Health Statistics, city and county population estimates produced by PRC, urban growth boundary (UGB) and county population forecasts from PRC, and housing development information from the cities.

POPULATION, HOUSING, AND EMPLOYMENT TRENDS

During the decade between 2000 and 2010, total population within the MSD grew by 21 percent, from 33,106 persons to 40,134. The MSD's share of County population has grown from 35 percent in 1990 to 39 percent in 2000 and then to 40 percent in 2010. Between 1990 and 2010 more than half of the County's growth occurred within the District. The two incorporated cities of McMinnville and Lafayette now contain about 90 percent of the District's population; about 10 percent of District residents live in unincorporated Yamhill County. Table 2 shows that average annual growth rates for the Cities of McMinnville, Lafayette, and Yamhill County between 2010 and 2016 have been significantly lower than in the 2000s.

Table 2 City, County, and School District Population					
				Avg. Annual Growth Rate	
	2000	2010	2016	2000-2010	2010-2016
MSD Total*	33,106	40,134	41,811	1.9%	0.7%
City of McMinnville	*26,499*	*32,187*	*33,405*	*2.0%*	*0.6%*
City of Lafayette	*2,586*	*3,742*	*3,975*	*3.8%*	*1.0%*
MSD Unincorporated	*4,021*	*4,205*	*4,431*	*0.4%*	*0.8%*
Yamhill County	84,992	99,193	104,990	1.6%	0.9%

*Note: District population determined by PSU-PRC based on aggregation of census blocks within the MSD boundary shapefiles. The 2010 MSD population published by the Census Bureau is 39,623. The 2016 population estimate uses the average annual growth rate implied by the Census Bureau's 2015 Small Area Income and Population Estimates, extrapolated to 2016.

Sources: U.S. Census Bureau, 2000 and 2010 censuses aggregated to MSD boundary by PSU Population Research Center; Portland State University Population Research Center, July 1, 2016 estimates.

Births

The number of births to women residing within the District peaked in 2007, just as it did in the U.S. and in Oregon. In both the U.S. and in Oregon, annual births fell more than eight percent between 2007 and 2011. Births began to rebound in Oregon in 2013 and in the U.S. in 2014.[1]

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[1] "Births: Final Data for 2014." National Vital Statistics Report, Volume 64, Number 12, National Center for Health Statistics; *Oregon Vital Statistics Annual Report 2014 Volume 1*, Oregon Health Authority, Center for Health Statistics.

Chart 2 shows that the number of births to MSD residents remained relatively stable between 2010 and 2015. The annual average of 489 births during this six year period is 14 percent below the average of the previous six year period between 2004 and 2009. In the "Enrollment Forecasts" section of this report we will examine the relationship between births, migration, and subsequent school enrollments.

Chart 2
Annual Births, 2000 to 2015
McMinnville School District

Year	Births
2000	505
2001	508
2002	519
2003	541
2004	543
2005	525
2006	596
2007	611
2008	577
2009	542
2010	489
2011	516
2012	488
2013	473
2014	489
2015	479

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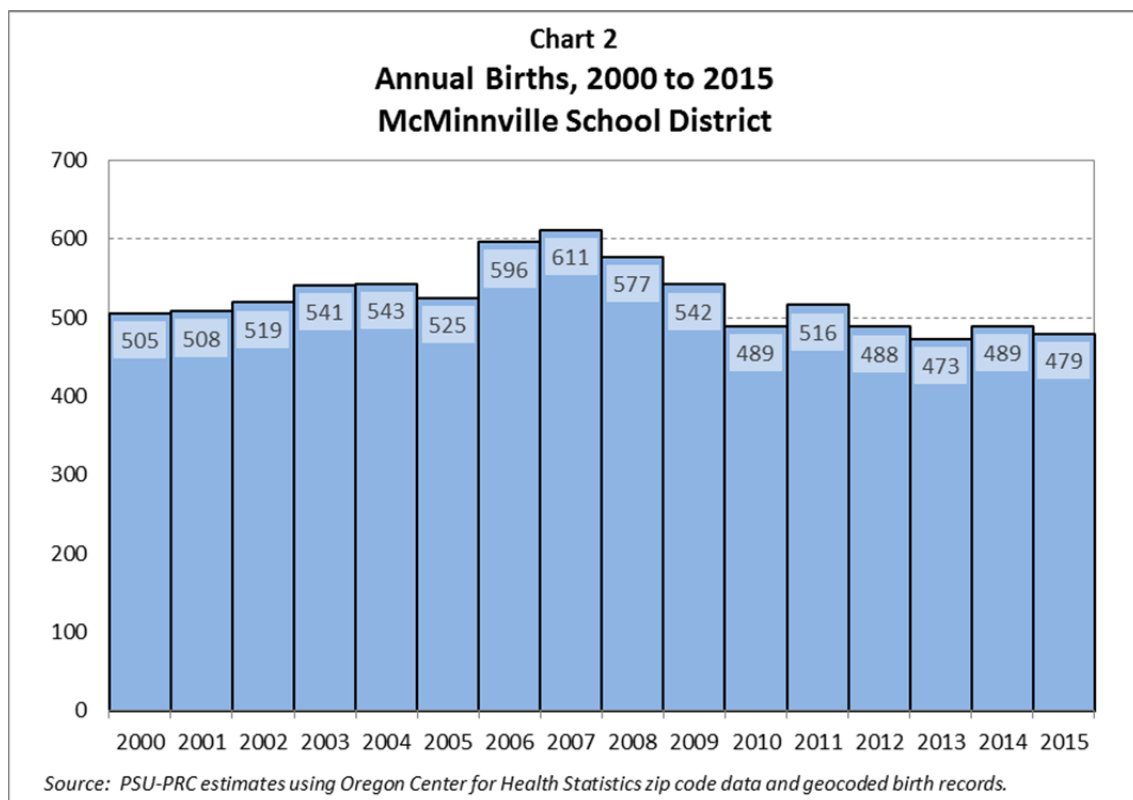
Employment

Population growth in the MSD depends to a great extent on the strength of the Yamhill County economy. Although many MSD residents commute to Washington, Marion, or Multnomah Counties, a majority of employed residents have jobs in Yamhill County, and there are nearly as many primary jobs within the District as there are employed residents.[2]

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[2] U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program. (2014 data). Commute shed report for residents of MSD. Includes workers at firms covered by unemployment insurance and most federal employees (excludes most agricultural jobs and self-employed). Of 15,296 workers in the MSD, 8,213 (53.7%) had primary jobs within Yamhill County https://onthemap.ces.census.gov/.

Yamhill County lost over 2,000 jobs between 2007 and 2010, and took four years to recover to its pre-recession employment level. By 2014, employment in the county had returned to its 2007 peak, and the county added over 1,000 more jobs in 2015. The latest job tally showed stable employment in 2016.[3]

The county's unemployment rate rose from 5.0 percent in 2007, slightly higher than the U.S. rate of 4.6 percent, to 11.4 percent in 2009. The most recent annual Yamhill County rate of 4.4 percent in December 2016 was similar to the nation's 4.7 percent rate. The number of jobs in Yamhill County increased by 310 (0.9%) between December 2015 and December 2016. The Portland MSA's job growth of 2.0 percent decelerated compared with growth in 2014 (3.0%) and 2015 (3.3%).[4]

Housing Growth

The 2010 Census data showed that the number of housing units within the MSD increased by 3,260 (27 percent) between 2000 and 2010. The numeric increase was nearly as large as the 3,559 unit increase in the 1990s. The number of households (occupied housing units) increased at a slower rate each decade as vacancy rates increased. Table 3 presents housing and household characteristics for MSD compiled from the decennial censuses of 1990, 2000, and 2010.

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[3] "Current Employment by Industry," Oregon Employment Department. Average annual non-farm employment in Yamhill County was 31,600 in 2007, 29,460 in 2010, 31,720 in 2014, 32,760 in 2015, and 32,730 in 2016.

[4] "Employment in In Yamhill County: December 2016," Oregon Employment Department; "Employment in In the Portland Metro Area: December 2016," Oregon Employment Department; Labor Force Statistics from the Current Population Survey, Bureau of Labor Statistics, U.S. Department of Labor.

Table 3
McMinnville School District
Housing Units, 1990, 2000, and 2010

	1990	2000	2010
Housing Units	8,589	12,148	15,408
10 year change		*3,559*	*3,260*
		41%	*27%*
Occupied Housing Units	8,351	11,540	14,477
10 year change		*3,189*	*2,937*
		38%	*25%*
Vacant Housing Units	238	608	931
Vacancy rate	*2.8%*	*5.0%*	*6.0%*

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

Residential building permit activity within the cities of McMinnville and Lafayette in each of the past 17 years is presented in Table 4. Development was brisk in the early and mid-2000s, but fell precipitously after 2007, consistent with the economic downturn that depressed the demand for housing throughout Oregon and the U.S. A recovery began in 2013, when both McMinnville and Lafayette issued their largest number of permits for single family homes since 2007, over 100 between the two cities. In each of the three most recent years, 2014 to 2016, the single family total edged closer to 150.

McMinnville permits in 2014 and 2016 also include the Lafayette Place Apartments in the Grandhaven Elementary area. The 75 unit first phase included 24 one bedroom and 51 two bedroom apartments. A 57 unit second phase with 24 one bedroom and 33 two bedrooms is nearing completion, and already half occupied as of the end of February 2017.

Table 4
Housing Units Authorized by Building Permits
Cities of McMinnville and Lafayette

Year Permit Issued	City of McMinnville		City of Lafayette	
	Single Family	Multiple Family	Single Family	Multiple Family
2000	140	231	9	0
2001	187	62	47	0
2002	232	72	82	0
2003	265	24	51	0
2004	258	56	20	0
2005	202	139	134	0
2006	189	0	100	0
2007	181	66	62	0
2008	75	80	17	0
2009	63	2	8	0
2010	56	3	3	0
2011	44	36	16	0
2012	46	2	7	0
2013	77	0	30	0
2014	108	75	40	0
2015	120	8	31	2
2016	96	57	51	0

McMinnville Sources: Annual Permit Reports, City of McMinnville, 2009-2016
(at http://www.ci.mcminnville.or.us/city/departments/building-division-reports/); U.S.
Census Bureau, Residential Construction Branch
(at https://www.census.gov/construction/bps/), 2000-2008.
Lafayette Source: Correspondance, City of Lafayette.

Table 5 identifies the number of homes permitted by elementary and middle school attendance area. The source is different than the data in Table 4, and while the 2014 and 2015 totals are similar to the two city totals, the 2016 total falls about 20 homes short of the total reported by the cities' building departments.[5] However, the information illustrates which parts of the District are seeing the greatest residential construction. About 30 percent of the MSD's recent single family home construction occurred in the Wascher Elementary area, in the Frontier Highlands, Green Heights, and Green Highlands subdivisions in the City of Lafayette. Development in Wascher may soon slow because few vacant lots remain in these subdivisions. After Wascher, the Columbus Elementary area had the second most new homes permitted in

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[5] The source for Table 5 is weekly reports from Construction Monitor, Inc., processed and geocoded by PRC. Construction Monitor is a subscription service. https://www.constructionmonitor.com/.

the last three years, primarily in the Valley's Edge and West Valley Estates subdivision. Several more phases are planned in each of these developments on the west side of the City of McMinnville.

Table 5 — New Housing Units Authorized by Building Permits 2014 to 2016 by Attendance Area

Single Family Units

Elementary Area	2014	2015	2016	Total
Buel	26	12	19	**57**
Columbus	32	40	19	**91**
Grandhaven	10	26	10	**46**
Memorial	13	16	22	**51**
Newby	12	14	20	**46**
Wascher	54	40	37	**131**
District Total	**147**	**148**	**127**	**422**

Middle School Area	2014	2015	2016	Total
Duniway	49	59	48	**156**
Patton	98	89	79	**266**
District Total	**147**	**148**	**127**	**422**

Multiple Family Units*

Elementary Area	2014	2015	2016	Total
Buel	4	0	0	**4**
Columbus	0	4	0	**4**
Grandhaven	75	0	57	**132**
Memorial	0	8	0	**8**
Newby	26	0	4	**30**
Wascher	0	2	0	**2**
District Total	**105**	**14**	**61**	**180**

Middle School Area	2014	2015	2016	Total
Duniway	26	4	4	**34**
Patton	79	10	57	**146**
District Total	**105**	**14**	**61**	**180**

Note: Excludes retirement housing.

Source: Individual records from Construction Monitor, Inc., processed and geocoded by PSU-PRC.

ENROLLMENT TRENDS

The McMinnville School District (MSD) enrolled 6,794 students in fall 2016, an increase of 60 students (0.9 percent) from the fall 2015 K-12 total of 6,734. This was the fourth consecutive K-12 enrollment increase; since 2013-14 a new record for district-wide enrollment has been set each year. Elementary (grades K-5) enrollment of 3,110 is also a new peak, in spite of incoming kindergarten classes in each of the most recent three years having fewer students than each of the previous three years from 2011-12 to 2013-14. Those peak kindergarten cohorts are now in 3rd, 4th, and 5th grade, constituting the three largest MSD classes among grades K-8. In contrast, middle school (grades 6-8) enrollment of 1,487 was the lowest in 10 years due to a relatively small cohort. High school (grades 9-12) enrollment has experienced four consecutive years of growth; the fall 2016 total of 2,197 is an increase of 88 students from fall 2015.

Table 6 summarizes the enrollment history for the District by grade level annually from 2006-07 to 2016-17. The five year changes at the bottom of the table show K-12 growth during both periods, 2006-07 to 2011-12, when the District had net growth of 158 students, and 2011-12 to 2016-17, when growth accelerated for a net gain of 304 students.

Although enrollment has grown, the relatively slow average annual growth of 0.7 percent over the past 10 years lags behind overall population growth due to long term trends including lower fertility rates and an aging population, and job losses suffered during the recent recession and slow recovery. Also, the MSD experienced a net loss of students to neighboring districts due to Oregon's new open enrollment policy.

Table 6
McMinnville School District, Enrollment History, 2006-07 to 2016-17

Grade	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
K	502	459	487	460	440	510	503	506	458	453	477
1	482	528	497	485	463	437	531	525	537	500	457
2	510	498	541	514	479	487	431	544	530	566	503
3	483	516	505	537	509	477	495	455	546	554	560
4	485	496	522	514	528	514	460	494	446	562	557
5	487	475	485	521	514	523	520	468	506	449	556
6	481	486	515	500	522	521	511	527	482	519	472
7	539	478	489	502	491	515	524	542	526	487	531
8	456	529	488	500	482	503	521	514	534	535	484
9	488	470	546	497	490	487	500	537	500	549	562
10	477	483	463	542	481	492	479	497	540	511	542
11	446	465	455	470	516	465	477	472	479	532	527
12	496	484	528	525	496	559	513	525	536	517	566
Total	**6,332**	**6,367**	**6,521**	**6,567**	**6,411**	**6,490**	**6,465**	**6,606**	**6,620**	**6,734**	**6,794**
Annual change		*35*	*154*	*46*	*-156*	*79*	*-25*	*141*	*14*	*114*	*60*
		0.6%	*2.4%*	*0.7%*	*-2.4%*	*1.2%*	*-0.4%*	*2.2%*	*0.2%*	*1.7%*	*0.9%*
K-5	2,949	2,972	3,037	3,031	2,933	2,948	2,940	2,992	3,023	3,084	3,110
6-8	1,476	1,493	1,492	1,502	1,495	1,539	1,556	1,583	1,542	1,541	1,487
9-12	1,907	1,902	1,992	2,034	1,983	2,003	1,969	2,031	2,055	2,109	2,197

	5 Year Change: 2006-07 to 2011-12		5 Year Change: 2011-12 to 2016-17		10 Year Change: 2006-07 to 2016-17	
	Change	Pct.	Change	Pct.	Change	Pct.
K-5	-1	*0%*	162	*5%*	161	*5%*
6-8	63	*4%*	-52	*-3%*	11	*1%*
9-12	96	*5%*	194	*10%*	290	*15%*
Total	**158**	***2%***	**304**	***5%***	**462**	***7%***

Sources: Oregon Department of Education; MSD

Private and Home School Enrollment, Transfers, and District "Capture Rate"

Several small private schools operate in McMinnville, but they may enroll students from beyond the District, and MSD residents may attend private schools outside of the District's boundaries. The best source for private school enrollment by residence is census household survey data. The Census Bureau's American Community Survey (ACS) includes questions about school enrollment by level and by type (public or private). The ACS estimate from MSD households surveyed between 2011 and 2015, indicates that only 3.7 percent (+/-1.6 percent) of MSD K-12 residents are enrolled in private schools (Table 7).

Table 7		
School Enrollment by Type of School		
Residents of McMinnville School District		
Census Data, 2011-2015		
	2011-15	
	estimate	MOE*
Enrolled in K-12th grade	7,708	*+/-657*
Public Schools	7,426	*+/-653*
Private Schools	282	*+/-123*
Private Share	*3.7%*	*+/- 1.6%*
Enrolled in 1st-8th grade	4,973	*+/-549*
Public Schools	4,778	*+/-542*
Private Schools	195	*+/-105*
Private Share	*3.9%*	*+/- 2.2%*
Enrolled in 9th-12th grade	2,175	*+/-311*
Public Schools	2,116	*+/-318*
Private Schools	59	*+/-40*
Private Share	*2.7%*	*+/- 1.9%*
*Margin of sampling error at the 90 percent confidence level.		
Source: 2011-2015 American Community Survey, Table B14002.		

Another difference between MSD enrollment and school-age population can be attributed to home schooling. Home schooled students living in the District are required to register with the Willamette Education Service District (WESD). In the past three years the number of MSD residents in the home school registry has been relatively stable. There were 246 students registered in fall 2016, compared with 249 in 2015-16 and 252 in 2014-15.[6]

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[6] Correspondence with

For purposes of forecasting enrollment, the ratios of kindergarten and first grade public school enrollment to overall population in the corresponding ages are very important. These ratios are called "capture rates." Once a student is enrolled in the public schools in first grade, it is very likely that they will continue to be enrolled in subsequent grades, unless their family moves out of the District. We compared MSD kindergarten and 1st grade enrollment in 1999-00 and 2000-01 to the 2000 Census and in 2009-10 and 2010-11 to the 2010 Census, finding that 80 to 82 percent of the kindergarten-age population and 85 to 87 percent of the 1st grade age population were enrolled in MSD schools. That means that about 18 percent of kindergarten-age children and 13 percent of first grade age children were not enrolled in MSD schools. These children include students who were enrolled in private schools or charter schools, net transfers to and from other public school districts, and home schooled students. Due to the addition of full day kindergarten in 2015-16, we estimate that the kindergarten capture rate has increased to 84.5 percent.

Inter-District Transfers

In each of the past several years the MSD has had a net loss of students due to inter-district transfers, as there have been fewer students from other public school districts transferring into the District than District residents transferring out. In the years before 2012-13, there were nearly 100 more MSD residents enrolled in other districts than residents of other districts enrolled in MSD. During this period, state policy prescribed that students who wanted to attend a public school outside their resident district had to gain approval from their home district and from the district that they wanted to attend, and that approval had to be renewed each year.

Although inter-district transfers may still be granted under the old policy, Oregon adopted a new open enrollment policy in 2012, under which students may transfer without approval of their home district to a district that designates available spaces at its schools. Students admitted through open enrollment can remain at other districts without reapplying. In 2012-13 through 2014-15, there were fewer students transferring to other districts through inter-district transfers, but a significant number of MSD residents took advantage of open enrollment at neighboring districts, as shown in Table 8. The three largest recipients of MSD residents during the three years of the open enrollment policy have been the Amity, Dayton, and Yamhill-Carlton

School Districts. Since 2015-16 these districts have opened fewer spaces to non-residents, resulting in relatively small net outflows from MSD.

	Into MSD		Out of MSD		
	Inter-District	Open Enrollment	Inter-District	Open Enrollment	Net
2011-12					
K-5	22	--	58	--	-36
6-8	8	--	30	--	-22
9-12	32	--	72	--	-40
Net	**62**	**0**	**160**	**0**	**-98**
2012-13					
K-5	22	0	28	54	-60
6-8	11	0	20	33	-42
9-12	33	4	47	48	-58
Net	**66**	**4**	**95**	**135**	**-160**
2013-14					
K-5	20	0	45	16	-41
6-8	16	0	19	6	-9
9-12	22	3	61	18	-54
Net	**58**	**3**	**125**	**40**	**-104**
2014-15					
K-5	36	0	24	37	-25
6-8	12	0	18	15	-21
9-12	35	3	45	37	-44
Net	**83**	**3**	**87**	**89**	**-90**
2015-16					
K-5	42	0	44	6	-8
6-8	14	0	18	0	-4
9-12	34	1	46	2	-13
Net	**90**	**1**	**108**	**8**	**-25**
2016-17					
K-5	39	0	41	20	-22
6-8	15	0	17	7	-9
9-12	46	5	32	11	8
Net	**100**	**5**	**90**	**38**	**-23**

Table 8
Inter-District Transfers and Open Enrollment

Source: McMinnville School District

Neighboring Districts

Table 9 displays several facts about MSD demographic and enrollment trends in comparison to three other nearby Yamhill County school districts. The MSD had the largest population growth among the four districts in the 2000s, and its enrollment growth outpaces the other three districts in each of the three periods shown in the table. The school-age share of the MSD's total population remained steady at 19 percent in both 2000 and 2010, while the other three districts all experienced declining school-age shares. Amity and Dayton have reversed their enrollment losses in part due to their open enrollment policies.

Table 9
Selected Yamhill County School Districts
Demographic and Enrollment Highlights, 2000 to 2015

	Amity	Dayton	McMinnville	Newberg
Enrollment growth, **2000-01 to 2005-06**	-5%	4%	10%	6%
Enrollment growth, **2005-06 to 2010-11**	0%	-8%	6%	1%
Enrollment growth, **2010-11 to 2015-16**	3%	3%	5%	0%
Grades 9-12 enrollment, **2015-16**	38%	35%	31%	31%
Latino enrollment, **2015-16**	15%	39%	35%	20%
Population growth, **2000 to 2010**	4%	12%	21%	17%
Population age 5 to 17, **2000**	24%	25%	19%	20%
Population age 5 to 17, **2010**	19%	21%	19%	18%
Population under age 5, **2000**	6.3%	6.6%	7.3%	7.2%
Population under age 5, **2010**	5.9%	7.5%	7.1%	6.2%
Population rural, **2010**	100.0%	39.7%	9.8%	20.4%

Data assembled by Population Research Center, PSU, from several sources: U.S. Census Bureau; McMinnville S.D.; OR Dept. of Education; U.S. Dept. of Education.

Enrollment Trends at Individual Schools

MSD elementary schools have added a total of 170 students in the most recent four years, with Memorial and Wascher experiencing the greatest growth. Since 2012-13, Memorial has added 107 students and Wascher has grown by 66 students. The District's other four elementary schools have had relatively stable enrollments; their 2016-17 enrollments are within 25 students of their 2012-13 totals.

The recent growth observed at the elementary level has not been shared by the District's two middle schools. While Duniway's enrollment has been relatively stable, Patton has had a net loss of 96 students since its 2013-14 peak. The 2016-17 student counts are relatively balanced between the two schools, with 752 at Duniway and 735 at Patton. Middle schools tend to experience fluctuations in enrollment due to only having three grades, and the current low enrollment will soon be supplanted by the large cohorts currently in 3rd to 5th grade.

Enrollment at McMinnville High School has grown steadily since 2012-13, adding 228 students in the most recent four years, reaching a new peak of 2,197 students.

Table 10 reports enrollment by school in each of the past six years, and the five year change between 2011-12 and 2016-17.

Table 10

Enrollment History for Individual Schools, 2011-12 to 2016-17

School	Historic Enrollment						Change 2011-12 to 2016-17	
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Number	Percent
Buel Elementary	492	527	504	527	507	510	18	3.7%
Columbus Elementary	501	508	508	511	517	483	-18	-3.6%
Grandhaven Elementary	534	532	557	551	562	554	20	3.7%
Memorial Elementary	527	492	520	536	563	599	72	13.7%
Newby Elementary	494	507	516	514	533	524	30	6.1%
Wascher Elementary	400	374	387	384	402	440	40	10.0%
Elementary Totals	**2,948**	**2,940**	**2,992**	**3,023**	**3,084**	**3,110**	**162**	**5.5%**
Duniway Middle School	759	752	752	763	782	752	-7	-0.9%
Patton Middle School	780	804	831	779	759	735	-45	-5.8%
Middle School Totals	**1,539**	**1,556**	**1,583**	**1,542**	**1,541**	**1,487**	**-52**	**-3.4%**
McMinnville High School	**2,003**	**1,969**	**2,031**	**2,055**	**2,109**	**2,197**	**194**	**9.7%**
District Totals	**6,490**	**6,465**	**6,606**	**6,620**	**6,734**	**6,794**	**304**	**4.7%**

Source: McMinnville 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 the 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 were 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 were 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 was used to develop initial net migration rates, which were used as 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 1999 to 2015, using data from the Oregon Health Authority, Center for Health Statistics. Detailed information including the age of mothers is used to calculate age-specific fertility rates (ASFRs) for both 2000 and 2010.

The total fertility rate (TFR) is another measure of fertility; it is an estimate of the number of children that would be born to the average woman during her child-bearing years based on ASFRs observed at a given time. The estimated TFR for the District decreased from 2.12 in 2000 to 1.84 in 2010. Similarly, drops in TFRs were observed in Yamhill County and the State during the past decade. In 2000, the TFRs were 2.12 for Yamhill County and 1.98 for the State; while in 2010, the TFRs were 1.82 for Yamhill County and 1.79 for the State.

Much of the decline in births that occurred after the 2007 peak has been attributed to the economic stress on U.S. families during the Great Recession. [7] Although U.S. birth rates for women age 30 and older are now higher than in 2007, rates for women under 25 have continued to decline; in 2015 they were at an all time low. Rates for women age 25 to 29 have also declined from their recent peak in 2007, and are close to a record low.[8] Based on the number of births through 2015 to MSD residents by age of mother, we have adjusted ASFRs, resulting in a TFR of 1.81 that is maintained throughout the forecast. In spite of the relatively low rates, MSD births are forecast to increase slightly due to overall population growth including in-migration of young families.

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 2009-10 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 MSD schools. Assumptions for capture rates based on census data are used to bring new kindergarten and first grade students into the District's enrollment.
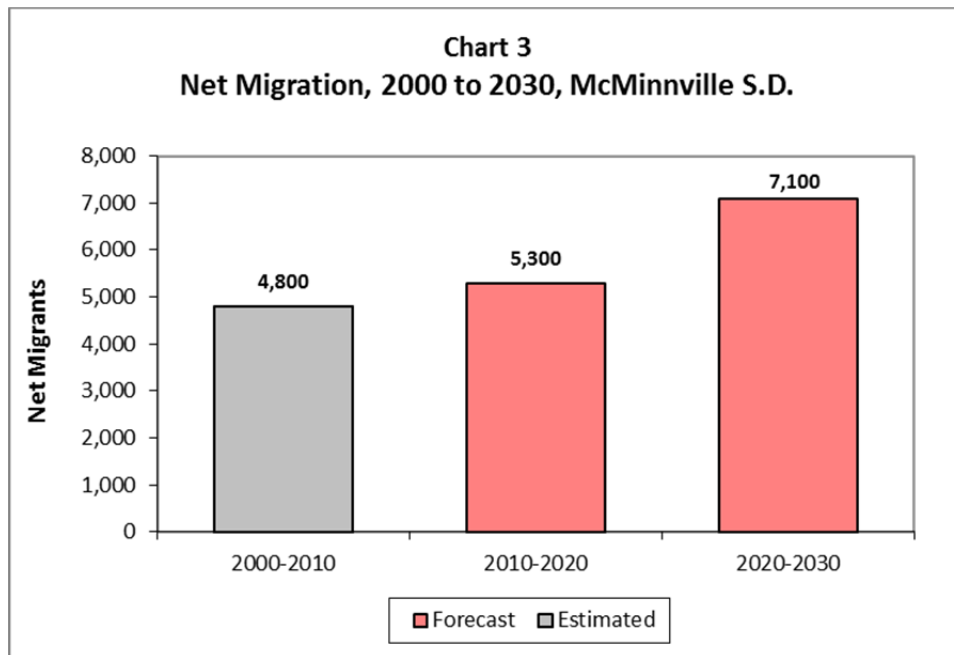
The other way that historic population and enrollment are linked is through migration. Annual changes in school enrollment by cohort closely follow trends in the net migration of children in the District's population. Once the students are in first grade, a set of baseline grade progression rates (GPRs) is used to move students from one grade to the next. Grade progression rates are the ratio of enrollment in an individual grade to enrollment in the previous grade the previous year. Baseline 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.

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[7] "In a Down Economy, Fewer Births." Pew Research Center, Pew Social & Demographic Trends, October 2011; "America's Baby Bust." Washington Post, July 21, 2014.

[8] "Births: Final Data for 2015." National vital statistics reports: from the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System 66.1 (2017). Available at https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf.

Population Forecast

Census data shows that the District added about 7,000 residents in the 2000s. About two thirds of the growth was due to positive net migration (more people moving in than moving out). Natural increase (births minus deaths) also contributed to population growth during the decade. Growth due to net migration is forecast to be about the same in the 2010 to 2020 period as in the 2000 to 2010 period. However, natural increase is slowing due to an aging population and lower fertility. By 2030, net migration will account for all of the District's population growth, as natural increase will be close to zero. Chart 3 shows the 2000 to 2010 estimate and 2010 to 2030 forecasts of MSD population growth attributable to net migration.

Chart 3
Net Migration, 2000 to 2030, McMinnville S.D.

Period	Net Migrants
2000-2010	4,800
2010-2020	5,300
2020-2030	7,100

Legend: Forecast, Estimated

District-wide population by age group is presented in Table 11. The forecast for 2020 population in the MSD is 46,294, an increase of 6,160 persons from the 2010 Census (1.4 percent average annual growth rate, or AAGR). School-age population (5 to 17) is forecast to increase by 525 persons, a slower rate (0.7 percent AAGR) than overall population growth. As a result, the share of population age 5-17 is expected to drop from 18.6 percent in 2010 to 17.3 percent in 2020. By 2020, the fastest growing age groups are the "baby boom" generation that will be in its 60s and early 70s. In the 2020 to 2030 period, the MSD grows by another 7,257 persons (1.5 percent AAGR), including a 546 person (0.7 percent AAGR) increase in school age population.

Table 11
Population by Age Group, History and Forecast
McMinnville School District, 2000 to 2030

	2000 Census	2010 Census	2020 Forecast	2030 Forecast	2010 to 2030 Change Number	2010 to 2030 Change Percent
Under Age 5	2,445	2,864	2,729	3,093	229	*8%*
Age 5 to 9	2,483	2,850	2,895	3,238	388	*14%*
Age 10 to 14	2,420	2,921	3,279	3,293	372	*13%*
Age 15 to 17	1,451	1,693	1,815	2,004	311	*18%*
Age 18 to 19	1,410	1,527	1,868	1,871	344	*23%*
Age 20 to 24	2,981	3,080	3,585	4,025	945	*31%*
Age 25 to 29	2,102	2,433	2,716	3,250	817	*34%*
Age 30 to 34	2,229	2,511	2,576	3,144	633	*25%*
Age 35 to 39	2,282	2,457	2,805	3,236	779	*32%*
Age 40 to 44	2,292	2,470	2,745	2,907	437	*18%*
Age 45 to 49	2,154	2,443	2,588	3,014	571	*23%*
Age 50 to 54	1,828	2,477	2,615	2,993	516	*21%*
Age 55 to 59	1,393	2,422	2,666	2,927	505	*21%*
Age 60 to 64	1,057	2,119	2,760	3,005	886	*42%*
Age 65 to 69	1,059	1,676	2,696	3,015	1,339	*80%*
Age 70 to 74	1,060	1,239	2,233	2,885	1,646	*133%*
Age 75 to 79	1,047	1,019	1,542	2,414	1,395	*137%*
Age 80 to 84	753	891	999	1,722	831	*93%*
Age 85 and over	660	1,042	1,182	1,515	473	*45%*
Total Population	**33,106**	**40,134**	**46,294**	**53,551**	**13,417**	***33%***
Total age 5 to 17	6,354	7,464	7,989	8,535	1,071	*14%*
share age 5 to 17	*19.2%*	*18.6%*	*17.3%*	*15.9%*		

		2000-2010	2010-2020	2020-2030
Population Change		**7,028**	**6,160**	**7,257**
Percent		*21%*	*15%*	*16%*
Average Annual		*1.9%*	*1.4%*	*1.5%*

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

The most recent coordinated county and city forecasts prepared by PRC were adopted by Yamhill County in November 2012. Updated forecasts currently being prepared for the county and each of its urban growth boundary (UGB) areas will be final in June 2017. PRC researchers will present preliminary county and UGB forecasts at a public meeting in Portland on March 14th. The MSD area includes two UGBs plus adjacent unincorporated area, so the new coordinated forecasts are not strictly comparable with the MSD population forecast. However, staff working on these MSD forecasts and the UGB forecast have consulted each other and have shared migration and fertility assumptions for the areas. Therefore, the population forecasts shown in

Table 11 will be relatively consistent with the new forecasts for the McMinnville and Lafayette UGBs.

District-wide Enrollment Forecast

These enrollment forecasts rely primarily on input from three general sources of information: births, recent enrollment history, and assumptions about future migration by sex and age group. In the model used to produce the forecast, we base assumptions about future migration levels on recent migration trends and on rates used in the county and UGB forecasts currently being developed.

Kindergarten enrollment is influenced by migration between birth and age five as well as the District's capture rate. Kindergarten capture rates in the forecast are 0.845. Chart 4 compares the historic and forecast number of births in the District with the historic and forecast number of MSD kindergarten students. The trend in kindergarten enrollment generally follows birth cohort (September to August) trends. For example, the peak kindergarten enrollments in the three school years from fall 2011 to fall 2013 correspond to the three year peak in births between September 2005 and August 2008, and the smaller enrollments in fall 2014 to fall 2016 reflect the smaller number of births beginning in 2008-09. However, external factors, such as migration of children into and out of the District between birth and age five and private school enrollment or inter-district transfers, can alter the relationship between lagged births and kindergarten enrollment. The gap between kindergarten enrollment and lagged births grew wider as migration fell during the recession, but narrowed in 2015-16 with the adoption of full day kindergarten. The ratio of fall 2016 MSD kindergarten enrollment to 2010-11 births was 0.91. This ratio exceeds the capture rate, demonstrating that net in-migration of young children in the past five years has been positive.

Chart 4
MSD Birth Cohorts and Kindergarten Enrollment
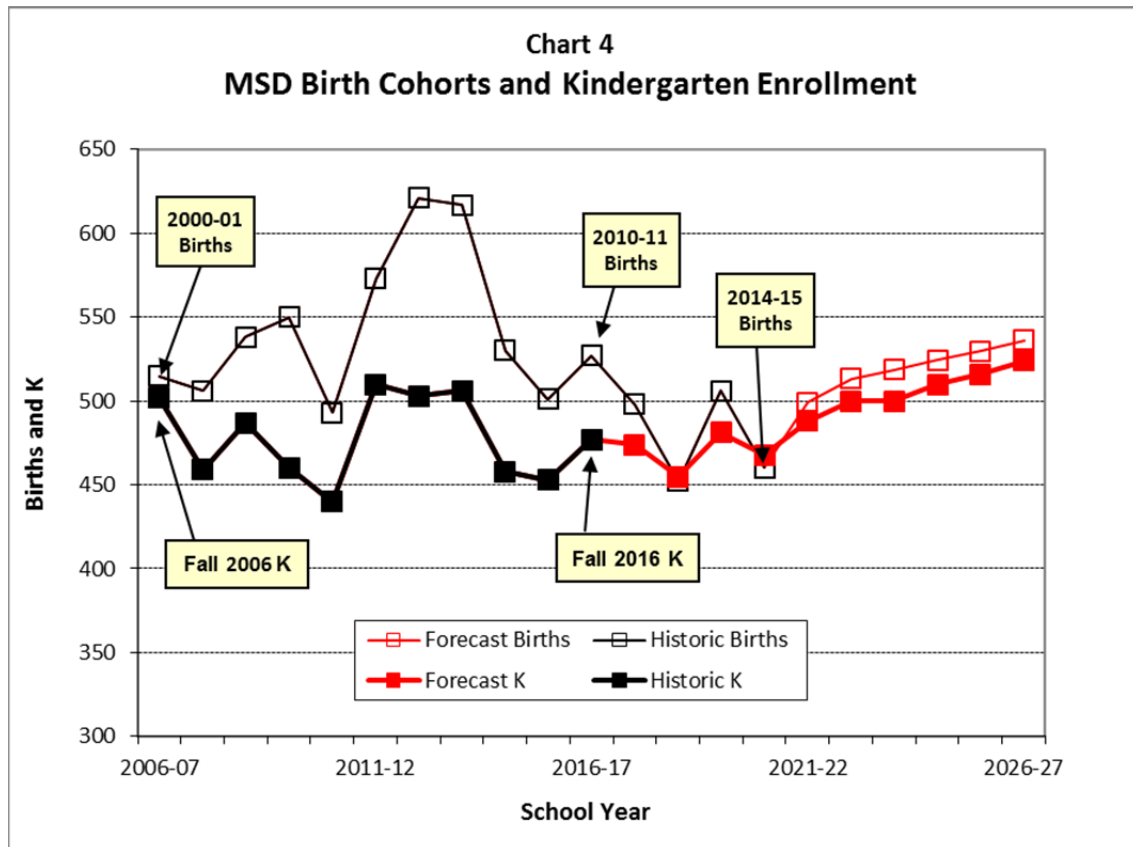
The district-wide enrollment forecasts for 2nd through 12th grade rely on migration rates and baseline GPRs, as described in the methodology section. For context, GPRs computed from the enrollment forecasts averaged over the 10 year horizon are compared in Table 12 with rates averaged over a 10 year historic period. GPRs for individual grades can fluctuate from year to year due families moving in or out of the District. The K-1st transition may be influenced by students entering the District from private kindergartens, but movement into and out of other elementary grades for reasons other than family mobility is minimal. Therefore, elementary GPRs higher than 1.00 when averaged over several years, or grouped in several grades, usually indicate a pattern of net in-migration.

The historic 10 year average GPRs shown in Table 12 reflect cycles of both growth and decline, from the end of the mid-2000s boom through the Great Recession and recent recovery. K-12 enrollment growth averaged just 0.7 percent annually during the 10 year period, but GPRs for all elementary and middle school grades were at or above 1.00. The forecast GPRs are generally higher that the historic rates due to the expectation that the current level of in-migration will continue. Future GPRs for the kindergarten to 1st grade transition are expected to be lower than

in the past, due to a higher capture rate associated with full day kindergarten. With more residents enrolled in MSD kindergartens, the net gain between kindergarten and 1st grade will be smaller. The baseline rate of 1.015 for the 8th-9th grade transition indicates that the District will gain a small number of students at 9th grade for reasons other than migration, including MSD residents who attended private schools through 8th grade.

	Table 12		
	Grade Progression Rates[1]		
	McMinnville S.D. History and Forecast		
Grade Transition	**10 Year Average: 2006-07 to 2016-17**	**Baseline (without the influence of migration)**	**Forecast Average: 2016-17 to 2026-27**
K-1	1.038	--[2]	1.023
1-2	1.021	1.000	1.020
2-3	1.011	1.000	1.018
3-4	1.003	1.000	1.017
4-5	1.000	1.000	1.016
5-6	1.023	1.000	1.016
6-7	1.004	1.000	1.015
7-8	1.000	1.000	1.013
8-9	1.015	1.015	1.026
9-10	0.993	0.990	0.999
10-11	0.979	0.980	0.989
11-12	1.100	1.090	1.100

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.

Table 13 contains grade level forecasts for the McMinnville School District for each year from 2017-18 to 2026-27. The forecasts are also summarized by grade level groups (K-5, 6-8, and 9-12). Overall K-12 enrollment growth of 231 students (three percent) is forecast from 2016-17 to 2026-27.

Elementary enrollment is expected to decline by 156 students (five percent) between 2016-17 and 2020-21, due to the recent downturn in births. After 2020-21, elementary growth resumes, adding 229 students (eight percent) in six years. Elementary enrollment does not recover to its current (2016-17) level until 2025-26.

Middle school enrollments trend in the opposite direction from elementary enrollments throughout the 10 year forecast horizon, growing by 250 students (17 percent) in the first four years between 2016-17 and 2020-21, and then declining as the smaller birth cohorts reach 6th grade. Middle school enrollments decline by 157 students (nine percent) between 2020-21 and 2026-27 but remain above their current (2016-17) level throughout the forecast.

High school enrollment remains relatively stable during the first four years of the forecast and then grows by 259 students (12 percent) between 2020-21 and 2023-24, reaching a peak of 2,445 in 2023-24 before falling by 183 students (seven percent) to 2,262 in 2026-27.

Table 13

McMinnville School District, Enrollment Forecasts, 2017-18 to 2026-27

Grade	Actual 2016-17	Forecast 2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
K	477	474	455	481	468	488	500	500	510	516	524
1	457	490	486	467	491	478	500	511	511	521	527
2	503	469	501	497	476	500	487	509	520	520	531
3	560	515	478	511	505	484	508	495	518	529	529
4	557	572	525	487	519	513	492	516	503	526	538
5	556	568	582	534	495	527	521	500	524	511	534
6	472	567	578	592	542	503	535	529	508	532	519
7	531	481	576	587	601	550	510	543	537	515	540
8	484	539	487	583	594	609	557	516	550	544	521
9	562	497	553	500	598	609	625	571	529	564	558
10	542	563	497	553	500	597	608	624	570	528	563
11	527	537	557	492	547	494	590	601	617	563	522
12	566	581	591	613	541	601	543	649	661	678	619
Total	**6,794**	**6,853**	**6,866**	**6,897**	**6,877**	**6,953**	**6,976**	**7,064**	**7,058**	**7,047**	**7,025**
Annual change		*59*	*13*	*31*	*-20*	*76*	*23*	*88*	*-6*	*-11*	*-22*
		0.9%	*0.2%*	*0.5%*	*-0.3%*	*1.1%*	*0.3%*	*1.3%*	*-0.1%*	*-0.2%*	*-0.3%*
K-5	3,110	3,088	3,027	2,977	2,954	2,990	3,008	3,031	3,086	3,123	3,183
6-8	1,487	1,587	1,641	1,762	1,737	1,662	1,602	1,588	1,595	1,591	1,580
9-12	2,197	2,178	2,198	2,158	2,186	2,301	2,366	2,445	2,377	2,333	2,262

	5 Year Change: 2016-17 to 2021-22		5 Year Change: 2021-22 to 2026-27		10 Year Change: 2016-17 to 2026-27	
	Growth	Pct.	Growth	Pct.	Growth	Pct.
K-5	-120	*-4%*	193	*6%*	73	*2%*
6-8	175	*12%*	-82	*-5%*	93	*6%*
9-12	104	*5%*	-39	*-2%*	65	*3%*
Total	**159**	***2%***	**72**	***1%***	**231**	***3%***

Population Research Center, Portland State University, February 2017

Individual School Forecasts

Forecasts are prepared for individual schools under a scenario in which the 2016-17 boundaries and grade configurations remain constant. Program changes, school choice policies, 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 today's facilities, programs, and boundaries were unchanged.

The methodology for the individual school forecasts relies on unique sets of grade progression rates for each school. New kindergarten classes were forecast each year based on births and recent enrollment trends within elementary attendance areas. Subsequent grades were forecast using GPRs based initially on recent rates for the school and adjusted based on expected levels of housing growth. The final forecasts for individual schools are controlled to match the district-wide forecasts.

Significant growth is not expected at any of the District's elementary schools over the five year forecast period, and four of the six schools are forecast to lose 30 or more students by 2021-22. New housing development and migration of young families into the District will compensate somewhat for the birth decline, particularly at Columbus and Newby, which share the District's largest ongoing residential development, Valley's Edge. Net enrollment gains of 18 students at Columbus and 12 students at Newby are forecast over the five year period.

Growth is expected at both middle schools in the coming three to four years. Duniway is expected to add 102 students by 2020-21, peaking at 854, while Patton adds 185 students by 2019-20, peaking at 920. By 2021-22 student counts at both middle schools will have begun to recede, but will still be well above their current enrollments. High school enrollment is forecast to remain close to its current level through 2020-21, and then add over 100 students for the 2021-22 school year.

Table 14 presents the enrollment forecasts for each school, grouped by school level (elementary, middle, and high).

Table 14
McMinnville School District, Enrollment Forecasts, 2017-18 to 2021-22

School	Actual	Forecast					Change 2016-17 to 2021-22	
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Number	Percent
Buel Elementary	510	496	480	483	474	480	-30	*-6%*
Columbus Elementary	483	486	474	468	477	501	18	*4%*
Grandhaven Elementary	554	524	518	504	486	500	-54	*-10%*
Memorial Elementary	599	610	597	584	579	568	-31	*-5%*
Newby Elementary	524	534	530	526	528	536	12	*2%*
Wascher Elementary	440	438	428	412	410	405	-35	*-8%*
Elementary Totals	**3,110**	**3,088**	**3,027**	**2,977**	**2,954**	**2,990**	**-120**	***-4%***
Duniway Middle School	752	771	788	842	854	820	68	*9%*
Patton Middle School	735	816	853	920	883	842	107	*15%*
Middle School Totals	**1,487**	**1,587**	**1,641**	**1,762**	**1,737**	**1,662**	**175**	***12%***
McMinnville High School	**2,197**	**2,178**	**2,198**	**2,158**	**2,186**	**2,301**	**104**	***5%***
District Totals	**6,794**	**6,853**	**6,866**	**6,897**	**6,877**	**6,953**	**159**	***2%***

Population Research Center, Portland State University, February 2017.

FORECAST ACCURACY

Forecasts should be understood to represent a range of outcomes even though discrete numbers are provided. In general, forecast error varies according to the size of the population being forecast and the length of the forecast horizon. The smaller the population and the longer the forecast period, the larger the error is likely to be. In particular, the school level forecasts depend on assumptions about the distribution of housing and population growth in small areas within the District, so their relative errors are likely greater than the District-wide forecast error. The forecasts should be used as only one of many tools in the planning process.

The previous forecasts that PRC prepared for the District are compared to actual fall 2016 enrollments in Tables 15 and 16. Forecasts based on historic enrollment through fall 2012 are characterized as four year forecasts, while those based on fall 2014 enrollment are characterized as two year forecasts.

Both forecasts fell short of the actual K-12 total in 2016-17. The most recent forecast predicted 87 (1.3 percent) fewer K-12 students than were enrolled fall 2016. However, most of the error was at the secondary levels. When aggregated by school levels, the middle grades forecast was 22 students below actual enrollment, and the high school grades forecast was 56 students below actual. The smaller errors for individual elementary grades and the aggregated shortfall of just nine students for grades K-5 bodes well for the long range accuracy of those forecasts prepared in December 2014. The new forecast presented in this report is only slightly higher than that forecast, mostly due to the higher baseline.

While the December 2014 district-wide forecast may be relatively reliable in the long run, the individual school forecasts will benefit from the "reset" included in this report, incorporating the latest enrollment through fall 2016. The "error" columns in Table 16 show that the mean absolute percent errors (MAPEs) for the individual schools were 5.8 percent for the two year forecast and 6.6 percent for the four year forecast.

Table 15
Fall 2016 Enrollment Compared to Previous Forecasts
By Grade Level

Grade	Actual	Two year forecast[1]			Four year forecast[2]		
		Fcst.	Diff.	Error	Fcst.	Diff.	Error
K	477	485	8	1.7%	454	-23	-4.8%
1	457	481	24	5.3%	477	20	4.4%
2	503	489	-14	-2.8%	510	7	1.4%
3	560	552	-8	-1.4%	527	-33	-5.9%
4	557	540	-17	-3.1%	543	-14	-2.5%
5	556	554	-2	-0.4%	554	-2	-0.4%
6	472	458	-14	-3.0%	450	-22	-4.7%
7	531	517	-14	-2.6%	513	-18	-3.4%
8	484	490	6	1.2%	474	-10	-2.1%
9	562	534	-28	-5.0%	539	-23	-4.1%
10	542	538	-4	-0.7%	515	-27	-5.0%
11	527	485	-42	-8.0%	515	-12	-2.3%
12	566	584	18	3.2%	566	0	0.0%
Total	**6,794**	**6,707**	**-87**	**-1.3%**	**6,637**	**-157**	**-2.3%**
MAPE[3]				**2.9%**			**3.1%**

1. Forecast for 2016-17 by PSU-PRC, baseline 2014-15 enrollment, December 2014.

2. Forecast for 2016-17 by PSU-PRC, baseline 2012-13 enrollment, May 2013.

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

Table 16
Fall 2016 Enrollment Compared to Previous Forecasts
By Individual School

School	Actual	Two year forecast[1]			Four year forecast[2]		
		Fcst.	Diff.	Error	Fcst.	Diff.	Error
Buel Elementary	510	553	43	8.4%	541	31	6.1%
Columbus Elementary	483	521	38	7.9%	544	61	12.6%
Grandhaven Elementary	554	574	20	3.6%	570	16	2.9%
Memorial Elementary	599	554	-45	-7.5%	487	-112	-18.7%
Newby Elementary	524	502	-22	-4.2%	525	1	0.2%
Wascher Elementary	440	397	-43	-9.8%	398	-42	-9.5%
Duniway Middle School	752	773	21	2.8%	727	-25	-3.3%
Patton Middle School	735	692	-43	-5.9%	710	-25	-3.4%
McMinnville High School	2,197	2,141	-56	-2.5%	2,135	-62	-2.8%
District	**6,794**	**6,707**	**-87**	**-1.3%**	**6,637**	**-157**	**-2.3%**
MAPE[3]				**5.8%**			**6.6%**

1. Forecast for 2016-17 by PSU-PRC, baseline 2014-15 enrollment, December 2014.

2. Forecast for 2016-17 by PSU-PRC, baseline 2012-13 enrollment, May 2013.

3. Mean absolute percent error for individual schools.

APPENDIX

POPULATION, HOUSING, SOCIAL AND ECONOMIC PROFILE

Population, Housing, Social and Economic Profile
McMinnville School District 40, Oregon

	2006-2010			2011-2015			Compare
	Estimate	CV*	Margin of Error (+/-)	Estimate	CV*	Margin of Error (+/-)	Statistically Different?
POPULATION							
Total population	38,882	🟢	612	40,492	🟢	633	**
Percent under 18 years	*25.6%*	🟢	*1.2%*	*26.2%*	🟢	*1.0%*	
Percent 65 years and over	*15.0%*	🟢	*0.8%*	*16.2%*	🟢	*0.9%*	
Median age (years)	35.3	🟢	1.2	36.3	🟢	1.2	
Percent white alone, non-Latino	*74.7%*	🟢	*1.7%*	*73.8%*	🟢	*2.0%*	
HOUSING							
Total housing units	14,836	🟢	448	15,553	🟢	486	**
Occupied housing units	13,959	🟢	443	14,291	🟢	454	
Owner occupied	8,872	🟢	467	8,888	🟢	505	
Percent owner-occupied	*63.6%*	🟢	*2.6%*	*62.2%*	🟢	*2.7%*	
Renter occupied	5,087	🟢	399	5,403	🟢	413	
Vacant housing units***	877	🟡	229	1,262	🟢	295	**
Vacancy rate	*5.9%*	🟡	*1.5%*	*8.1%*	🟢	*1.8%*	
Average household size	2.65	🟢	0.07	2.72	🟢	0.07	
Renter households paying more than 30 percent of household income on rent plus utilities	*50.3%*	🟢	*5.7%*	*55.0%*	🟢	*5.3%*	
SOCIAL							
Age 25+ bachelor's degree or higher	*21.5%*	🟢	*1.9%*	*22.2%*	🟢	*2.2%*	
Foreign-born population	4,138	🟢	468	4,909	🟢	689	
Percent foreign-born	*10.6%*	🟢	*1.2%*	*12.1%*	🟢	*1.7%*	
Age 5+ language other than English at home	6,614	🟢	610	7,330	🟢	764	
Percent language other than English	*18.4%*	🟢	*1.7%*	*19.3%*	🟢	*1.9%*	
ECONOMIC							
Median household income (2015 dollars)	$49,062	🟢	$3,309	$46,842	🟢	$2,847	
Per capita income (2015 dollars)	$24,382	🟢	$1,289	$23,482	🟢	$1,508	
Percent of persons below poverty level	*17.5%*	🟢	*2.8%*	*19.6%*	🟢	*2.8%*	

* Green , yellow , and red icons indicate the reliabilty of each estimate using the coefficient of variation (CV). The lower the CV, the more reliable the data. High reliability (CV <15%) is shown in green, medium reliability (CV between 15-30% - be careful) is shown in yellow, and low reliability (CV >30% - use with extreme caution) is shown in red. However, there are no absolute rules for acceptable thresholds of reliability. Users should consider the margin of error and the need for precision.

** Indicates that the two estimates are statistically different at the 90 percent confidence level based on results of z-test taking into account the difference between the two estimates as well as an approximation of the standard errors of both estimates.

*** Vacant units include those for sale or rent, those sold or rented but not yet occupied, those held for seasonal, recreational, or occasional use, as well as other vacant such as homes under renovation, settlement of an estate, or foreclosures.

Source: U.S. Census Bureau, American Community Survey 5 year estimates. Surveys are collected over a 60 month period. Estimates represent average characteristics over the entire period. Tabulated by Population Research Center, Portland State University, with additional calculations from source data as needed.