

## 2015-16 Enrollment Projections

TO: Marion Anastasia, Superintendent of Schools, White Mountains, NH SAU #36  
FROM: Donald G. Kennedy, Ed.D., Demographic Specialist  
DATE: July 26, 2016  
RE: Enrollment Projections

---

We are pleased to send you the enclosed documents displaying the past, present, and projected enrollments for the White Mountains School District, SAU #36. We have used the figures given to us by the district and we assume that the method of collecting the enrollment data has been consistent from year to year. It is worth noting that this time of transition is the most difficult of the past 25 years to reliably forecast future enrollments, due to the irregular/uneven pace of communities recovering from the effects of the economic cycle upon real estate markets and school enrollments.

White Mountains has not recently asked NESDEC to prepare enrollment projections, thus there is no valid comparison of the variances between projections v. actual enrollments – as there will be in fall 2016, using this newly updated forecast (NESDEC will update the projection in October/November, 2016). However, today we can describe two factors now at work which will have the greatest effect upon future enrollments: a. the number of births to residents of Carroll, Dalton, Jefferson, Lancaster and Whitefield, the five towns of SAU#36, and, to a greater degree, b. the return of in-migration (which had slowed, due to the real estate slowdown). The students in Grades 2-12 in this report were born when SAU#36 was averaging 75 births per year; recently (and expected over the next 6-7 years) are about 61-72 births annually...averaging about 9-10 fewer per year than previously. Hard-hit Connecticut experienced an 8.6% decline in births from 2007 to 2009 (in part caused by the economic Recession), the largest decline among the six New England states – followed by an 8.1% decline in Rhode Island births, the two states with the highest rates of unemployment in the New England region – Massachusetts births declined by only 3.9% over these three years. **Incidentally, New Hampshire experienced a 4.4% decline in**

**births from 2007 to 2009 (in large part caused by the economic Recession), the next-to-smallest decline among the six New England states.** Economists are forecasting a slow-yet-steady recovery from the current rates of unemployment which, in turn, may lead to additional in-migration and births. The unemployment rate as of June, 2016 in CT was 5.8%; RI 5.5%; US non-farm unemployment 4.9% (US unemployment was above 10% during the Great Recession); New England average 4.9%; MA 4.2%; ME 3.7%; VT 3.2%; and **NH only 2.8%** - other nearby states: PA 5.6%; NJ 5.1%; and NY 4.7%. This rate influences the likelihood of improving real estate sales, residential construction and the number of new families moving into the community.

Like many nearby communities White Mountains continues to experience enrollment fluctuations of in/out-migration in Grades 1-8 (Grades 9-12 are excluded from this calculation, as often there sometimes is a 7% increase in Grade 9 for reasons that have little to do with families moving into SAU#36 towns). **See below the paragraph describing “Hidden Trends within the District - the “Grades 1-8 stability” - which the past three school years has included +1% net in-migration of families to the White Mountains Public Schools (+1.8% in 2015-16) – at grade levels which more commonly experience stability.**

**“Hidden Trends” within the district:** There are additional trends and counter-trends. We know that White Mountains currently is experiencing net in-migration of new families with school age children. Yet how can we accurately quantify the increasing numbers of these children? More so than other grade levels, Grades 1-8 in most districts tend to be quite stable in their numbers (example: if the Grade 1-7 total was 600 children in Year #1, the Grade 2-8 total in Year #2 typically would be approximately 600 – the same cohort of children). Thus these "usually stable grades" provide a useful yardstick by which to measure a district's tendency toward in-/out-migration. White Mountains' data reveals an increasing trend toward "net in-migration". **In the past four school years, the total in Grades 2-8 has been larger than when that same group was in Grades 1-7 during the prior school year. For example, the 591 children in Grades 1-7 in 2011-12, increased by 14 students to become 605 in 2012-13. In 2015-16, the 569 in last year's Grades 1-7 had increased to 577 in Grades 2-8 – a gain of 8 children...the increases have averaged 8 children for the most recent four years, following an earlier period of slight decline. This in-migration in grades that typically are stable in numbers - provides an additional benchmark by which to assess enrollment trends.**

Over the next three years, K-8 enrollments are forecast to decrease by a total of 42 students; and the high school level to decrease by about 37 pupils...all within the next three years – as the classes move up the grades. After that point these projections show shrinking enrollment in Grades K-8 of about 52 children, combined with a decrease of 49 pupils in Grades 9-12 – as the classes work their way up through the grades. **That said, it is possible that real estate turnover will have increased, bringing in additional new families - see the “Projections” page.**

**Will these patterns of increasing enrollments really last for as long as ten years? That is difficult to answer.** All projections are more reliable for Years #1-5 in the future; and less reliable in Years #6-10 – as some many factors can change. As soon as the economy and real estate situation become more stable in the region, additional in-migration may occur in White Mountains SAU#36. Many communities in the region sold during 2008-2013 only about 60-80% as many homes as in 2003-2005. Building permits had slowed as well; see the “Additional Data” table below. **As additional families move in, any flat enrollments or forecasted declines may moderate.** See the description on Page 4 below regarding “reliability of projections”. The birth numbers used in the projections, through 2015, are from the NH Department of Public Health. The “estimated” years, beginning with 2016 are a rolling five-year average, which NESDEC has found to be the most accurate method of estimation. Local City/Town Clerks have up-to-date information on local births however do not have access to the numbers of White Mountains residents born out-of-state (information which will eventually become known to the NH DPH).

The two most difficult grades to forecast in all districts are Kindergarten and Grade 9. The latter is difficult to anticipate, as there are so many options for Grade 9 (in vocational or agricultural schools, private or parochial non-public schools, etc.). Kindergarten can be difficult to project based upon births alone, as many districts have large numbers of “net move-ins/move-outs” who are ages 1-4. Some districts take the extra steps to track 3 and 4-year olds with a local census, or report to NESDEC the known number of 4-year olds in local preschools/nursery schools which typically enroll Kindergarteners in the district. Knowing this information helps NESDEC to project Kindergarteners more reliably...as does data from the Kindergarten Screening in districts which also track 3 and 4-year old siblings (or neighbors) at that time. The more data, in addition to births, which is sent to NESDEC, the greater is the chance that “enrollment surprises” will be minimized.

**Will many new families be moving into our school district?** Everyday across America, 10,000 “Baby Boomers” celebrate their 65<sup>th</sup> birthday - a phenomenon which will continue for a decade. New England has a disproportionately large share of these senior citizens, many of whom had planned to “downsize” their living arrangements, yet postponed putting homes on the market due to the Great Recession. School enrollments are influenced strongly by the number of real estate sales, as these contribute new families moving into many districts. In over 80% of districts, the number of real estate sales is 4-5 times larger than the number of building permits for new residential construction – **thus the number of real estate sales often is a more important factor than building permits.**

**In New England, how rapidly will additional homes be placed on the market?** A mid-2014 study using data from the Federal Housing Finance Agency, Bureau of Economic Analysis and the U.S. Census Bureau directly links home prices to the “real Gross Domestic Product” (GDP) in each of the nine regions in the country. However New England ranks only 7<sup>th</sup> among the 9 regions in the recovery of its regional economy (as measured in “the bubble” prior to the Recession, in “real GDP”). Comparing the regional economies from 2 Quarter of 2007 to 4 Quarter 2013: W. South Central = +18.6% (that is, many jobs are available); W. North Central +11.8%; Pacific +7.4%; E. South Central + 5.6%; Middle Atlantic + 5.1%; Mountain + 4.1%; **New England +3.4%**; South Atlantic + 2.1%; and E. North Central + 2.0%. Home sales prices are +14.6% in the W. South Central region (including Texas, Arkansas, Louisiana, and Oklahoma) with the strongest “real G.D.P.” v. -4.4% in New England. Thus, although real estate sales and rentals are very strong in some New England towns and cities, there are many senior citizens still refraining from placing their homes on the market – as house prices still may be rising. New England births, however, are likely to remain at low levels, due to the advanced age of the New England population.

# Analyzing Your Enrollment

## Historical Public Enrollments

1. After the "YEAR" column can be found the "BIRTHS" column. The number of births to residents for each of eleven years is displayed. Note any trends, e.g., have births been decreasing? increasing? leveling off? Kindergarten and Grade 1 enrollments normally are quite responsive to these fluctuations.
2. Look **down** the K and 1 columns, noting the direction of the trend. This affords a comparison of these classes over a ten-year period. Add the K and Grade 1 enrollments of the first school year recorded, and compare them with the sum of the current K and Grade 1 enrollments.
3. Take the first K class and follow it diagonally to trace its movement to Grade 1, 2, etc. up to its current 10th grade status. This comparison (which can be accomplished for other classes also) gives some measure of the effects of migration in your school district. If a sixth grade class today is larger than it was as a K class six years ago, then net in-migration probably has occurred; if it is smaller, then net out-migration probably has occurred.
4. Compare each K class with the previous year's graduating class. Note which is larger and by what amount one surpasses the other. Larger graduating classes generally reflect declining enrollments; larger K classes generally indicate increasing enrollments.
5. In the "Grade Combinations" section, note the trends of elementary, middle school and high school enrollments. A significant and consistent trend in these summaries usually results in the corresponding trend for projected enrollments. If enrollments are leveling off in the elementary grades after a period of decline, then the secondary enrollments might be expected to continue to decline for several years until the leveling off experience has had time to take hold at the secondary grades.

### Enrollment Projections

1. Note the trends exhibited in the total K-12 (or 1-12) projection for the next five years as well as the projections for various grade combinations. The trends on this page should generally exhibit a continuation of the trends mentioned above for historical enrollments, although the **rate** of change may be quite different.
2. Look at the births in the most recent years and note whether the trend is up, down, or level.
3. Make similar comparisons as appropriate on this page as were suggested for the "Historical Public Enrollments" page.

### PROJECTION METHODOLOGY

Cohort component (survival) technique is a frequently used method of preparing enrollment forecasts. NESDEC uses this method, but modifies it in order to move away from forecasts which are wholly computer or formula driven. Such modification permits the incorporation of important, current town-specific information into the generation of the enrollment forecasts (such as the volume of real estate sales, building permits, in/out-migration, etc.). Basically, percentages are calculated from the historical enrollment data to determine a reliable percentage of increase or decrease in enrollment between any two grades. For example, if 100 students enrolled in Grade 1 in 2013-14, increased to 104 students in Grade 2 in 2014-15, the percentage of survival would have been 104% or a ratio of 1.04. Such ratios are calculated between each pair of grades or years in school over several recent years.

After study and analysis of the historical ratios, and based upon a reasonable set of assumptions regarding births, migration rates, retention rates, etc., ratios most indicative of future growth patterns are determined for each pair of grades. The ratios thus selected are applied to the present enrollment statistics for a pre-determined number of years. The ratios used are the key factors in the reliability of the projections, given the validity of the data at the starting point. The strength of the ratios lies in the fact that each ratio encompasses **collectively** the variables that account for increases or decreases in the size of a grade enrollment as it moves on to the next grade. Each ratio represents the cumulative effect of the following factors:

1. Real estate turnover and new residential construction;
2. Migration, in or out, of the schools;
3. Drop-outs, transfers, etc.;
4. Births to residents;
5. Retention in the same grade.

## RELIABILITY OF ENROLLMENT PROJECTIONS

Projections can serve as useful guides to school administrators for educational planning. In this regard, the projections are generally most reliable when they are closest in time to the current year. Projections six to ten years out may serve as a guide to future enrollments, and are useful for facility planning purposes. However, they should be viewed as subject to change given the likelihood of changes in the underlying assumptions/trends.

Projections that are based upon **the children who already are in the district** (the current K-12 population only) will be the most reliable; the second level of reliability will be for those children already **born into the community but not yet old enough to be in school**. A less reliable category is the group for which an estimate must be made **to predict the number of births**, thereby adding an additional variable. See these three multi-colored groupings on the “Projected Enrollment” slide/page.

**How often do the actual enrollments closely match the NESDEC projections?** The research literature reports the closest that enrollment forecasters are likely to come to actual enrollments is about 1% variance per year-from-the-known-data. That is, a 1% variance from projection-to-actual “one-year-out” into the future (2% variance “two-years-out” ... 10% variance “ten-years-out”). NESDEC reaches this “highest possible” standard in about 90% of cases. When our NESDEC variance is greater, the reasons often are one of the following: a. imbedded/intervening “hidden” variables (examples: a parochial school closed or other students returned from non-public schools, a charter school opened, the Kindergarten program changed entrance age or to extended/full-day, the high school toughened its course credit/graduation requirements, the District set new attendance boundaries for elementary schools, or the District had well-publicized budget/referendum academic accreditation difficulties); b. the District size was below 500 students, thus subject to fluctuations in total numbers; or c. the District has not done enrollment projections on an annual basis.

Annual updates allow for early identification of recent changes in historical trends. When the actual enrollment in a grade is significantly different (high or low) from the projected number, it is important (yet difficult) to determine whether this is a one-year aberration or whether a new trend may have begun. **In light of this possibility, NESDEC urges all school districts to have updated enrollment forecasts developed by NESDEC each October.** This service is available at no cost to affiliated school districts.

## Using This Information Electronically

If you would like to extract the information contained in this report for your own documents or presentations, you can use Adobe Acrobat reader to convert the desired information to a “snapshot,” which can be inserted into PowerPoint slides, Word documents, etc. Because the snapshot tool creates a graphic, the image is not editable.

### Steps for Using The Snapshot Tool in Adobe Acrobat Reader:

1. Click on Edit Menu (earlier versions of Adobe Reader might require you to click on the Tools menu and then choose “Select and Zoom;”);
2. Choose “Take a Snapshot” (or “Snapshot Tool” in earlier versions);
3. Click and drag around the text, chart, and/or graphics that you would like to capture: your selection will be copied to the clipboard automatically;
4. Click in the document where you would like the information to appear;\*
5. Give Paste command.

If you have an earlier version of Adobe Acrobat and these instructions don’t work for you, contact your tech support person, or NESDEC and we will try to assist you. Telephone (508)481-9444 or [ep@nesdec.org](mailto:ep@nesdec.org). Ask for Peggy, Don, or Carol.

\*You may paste your snapshot onto a PowerPoint slide, onto an Excel sheet, or even into a graphics program to save as a separate graphic file (in .jpg or other format), so that it is available for inserting into future documents.



# SAU #36 Historical Enrollment

School District: **White Mountains RSD, NH - SAU #36**

7/26/2016

Note: Enrollments for 2005-06 through 2010-11 were obtained from the NH Dept. of Education; enrollments beginning 2011-12 were furnished by the District.

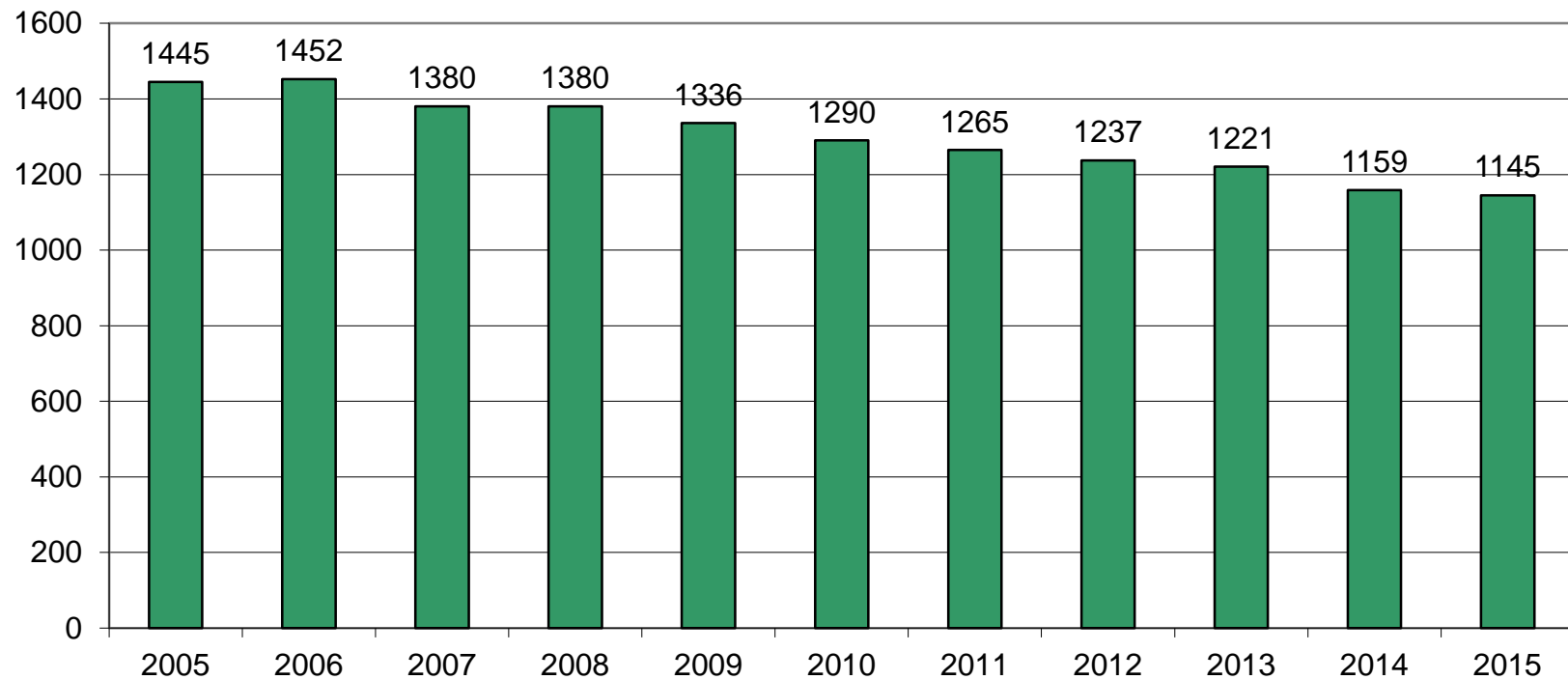
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2000	99	2005-06	56	74	100	80	96	112	109	107	107	110	157	121	124	92	0	1389	1445
2001	71	2006-07	62	81	80	102	79	103	113	116	105	110	138	140	114	109	0	1390	1452
2002	71	2007-08	50	75	88	79	100	74	104	113	115	105	118	112	137	110	0	1330	1380
2003	64	2008-09	61	84	79	86	85	109	75	99	109	113	121	115	109	135	0	1319	1380
2004	64	2009-10	92	68	87	82	91	89	112	84	102	110	123	109	99	88	0	1244	1336
2005	68	2010-11	70	69	73	82	80	94	89	108	90	105	128	109	103	90	0	1220	1290
2006	79	2011-12	63	100	64	68	83	78	98	92	108	86	119	104	109	93	0	1202	1265
2007	73	2012-13	71	65	102	61	70	87	85	99	95	108	91	113	97	93	0	1166	1237
2008	83	2013-14	40	90	75	104	63	69	84	90	96	100	114	97	102	97	0	1181	1221
2009	77	2014-15	36	67	84	66	108	62	71	85	93	99	101	105	88	94	0	1123	1159
2010	65	2015-16	42	62	70	86	69	109	63	77	82	91	113	94	98	89	0	1103	1145

Historical Enrollment in Grade Combinations									
Year	K-4	K-5	PK-8	K-8	5-8	6-8	7-8	7-12	9-12
2005-06	462	571	951	895	433	324	217	711	494
2006-07	445	558	951	889	444	331	215	716	501
2007-08	416	520	903	853	437	333	220	697	477
2008-09	443	518	900	839	396	321	222	702	480
2009-10	417	529	917	825	408	296	212	631	419
2010-11	398	487	860	790	392	303	195	625	430
2011-12	393	491	840	777	384	286	194	619	425
2012-13	385	470	843	772	387	302	203	597	394
2013-14	401	485	811	771	370	286	196	606	410
2014-15	387	458	771	735	348	277	192	580	388
2015-16	396	459	751	709	313	250	173	567	394

Historical Percentage Changes			
Year	K-12	Diff.	%
2005-06	1389	0	0.0%
2006-07	1390	1	0.1%
2007-08	1330	-60	-4.3%
2008-09	1319	-11	-0.8%
2009-10	1244	-75	-5.7%
2010-11	1220	-24	-1.9%
2011-12	1202	-18	-1.5%
2012-13	1166	-36	-3.0%
2013-14	1181	15	1.3%
2014-15	1123	-58	-4.9%
2015-16	1103	-20	-1.8%
Change		-286	-20.6%

# SAU #36 Historical Enrollment

**PK-12, 2005-2015**



# SAU #36 Projected Enrollment

School District: White Mountains RSD, NH - SAU #36

7/26/2016

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2010	65		2015-16	42	62	70	86	69	109	63	77	82	91	113	94	98	89	0	1103	1145
2011	64		2016-17	43	62	65	68	89	69	109	66	77	84	97	110	86	96	0	1078	1121
2012	61		2017-18	44	59	65	63	71	89	69	115	66	79	90	94	101	84	0	1045	1089
2013	65		2018-19	45	63	62	63	65	71	89	73	114	67	84	88	86	99	0	1024	1069
2014	72		2019-20	46	70	66	60	65	65	71	94	73	116	72	82	80	84	0	998	1044
2015	66	(prov.)	2020-21	47	64	73	64	62	65	65	75	94	75	124	70	75	78	0	984	1031
2016	66	(est.)	2021-22	48	64	67	71	66	62	65	68	75	96	80	121	64	73	0	972	1020
2017	66	(est.)	2022-23	49	64	67	65	74	66	62	68	68	77	103	78	111	63	0	966	1015
2018	67	(est.)	2023-24	50	65	67	65	68	74	66	65	68	69	82	100	71	109	0	969	1019
2019	67	(est.)	2024-25	51	65	68	65	68	68	74	69	65	69	74	80	91	69	0	925	976
2020	66	(est.)	2025-26	52	64	68	66	68	68	68	78	69	66	74	72	73	89	0	923	975

\*Projections should be updated on an annual basis in order to reflect changes in births, real estate sales, in-/out-migration of families and housing construction.

Based on an estimate of births
  Based on children already born
  Based on students already enrolled

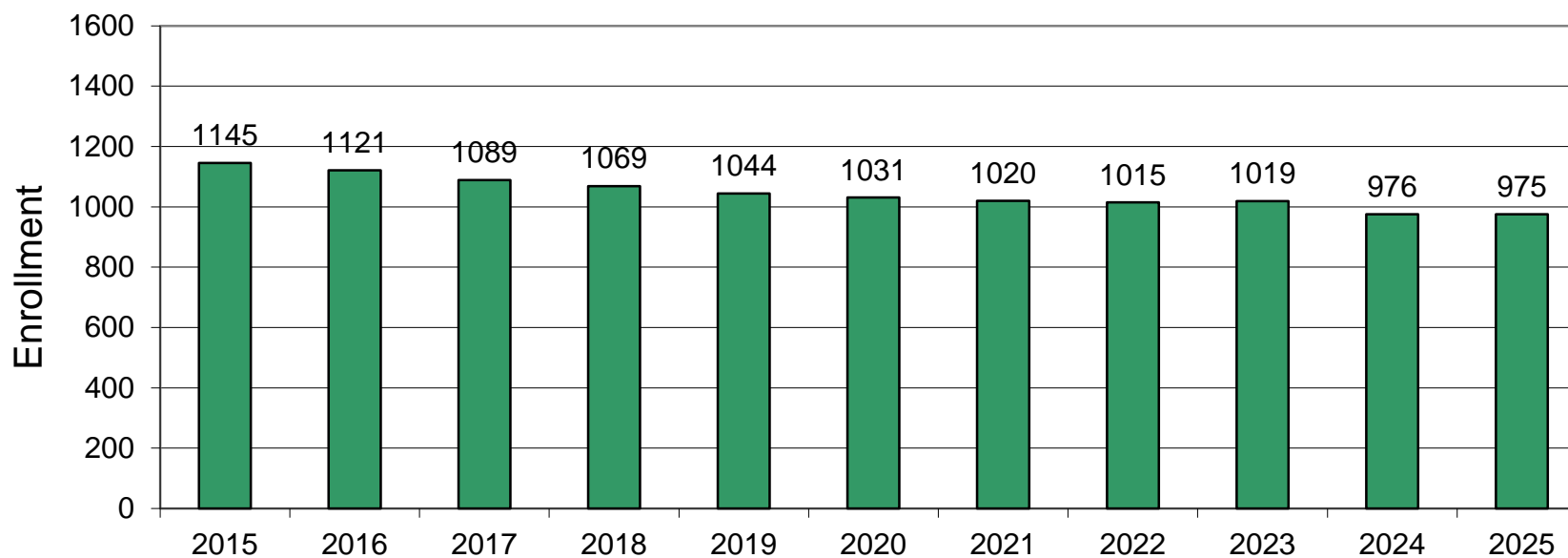
Projected Enrollment in Grade Combinations*									
Year	K-4	K-5	PK-8	K-8	5-8	6-8	7-8	7-12	9-12
2015-16	396	459	751	709	313	250	173	567	394
2016-17	353	462	732	689	336	227	161	550	389
2017-18	347	416	720	676	329	260	145	514	369
2018-19	324	413	712	667	343	254	181	538	357
2019-20	326	397	726	680	354	283	189	507	318
2020-21	328	393	684	637	309	244	169	516	347
2021-22	330	395	682	634	304	239	171	509	338
2022-23	336	398	660	611	275	213	145	500	355
2023-24	339	405	657	607	268	202	137	499	362
2024-25	334	408	662	611	277	203	134	448	314
2025-26	334	402	667	615	281	213	135	443	308

See "Reliability of Enrollment Projections" section of accompanying letter. Projections are more reliable for Years #1-5 in the future than for Years #6 and beyond.

Projected Percentage Changes			
Year	K-12	Diff.	%
2015-16	1103	0	0.0%
2016-17	1078	-25	-2.3%
2017-18	1045	-33	-3.1%
2018-19	1024	-21	-2.0%
2019-20	998	-26	-2.5%
2020-21	984	-14	-1.4%
2021-22	972	-12	-1.2%
2022-23	966	-6	-0.6%
2023-24	969	3	0.3%
2024-25	925	-44	-4.5%
2025-26	923	-2	-0.2%
<b>Change</b>		<b>-180</b>	<b>-16.3%</b>

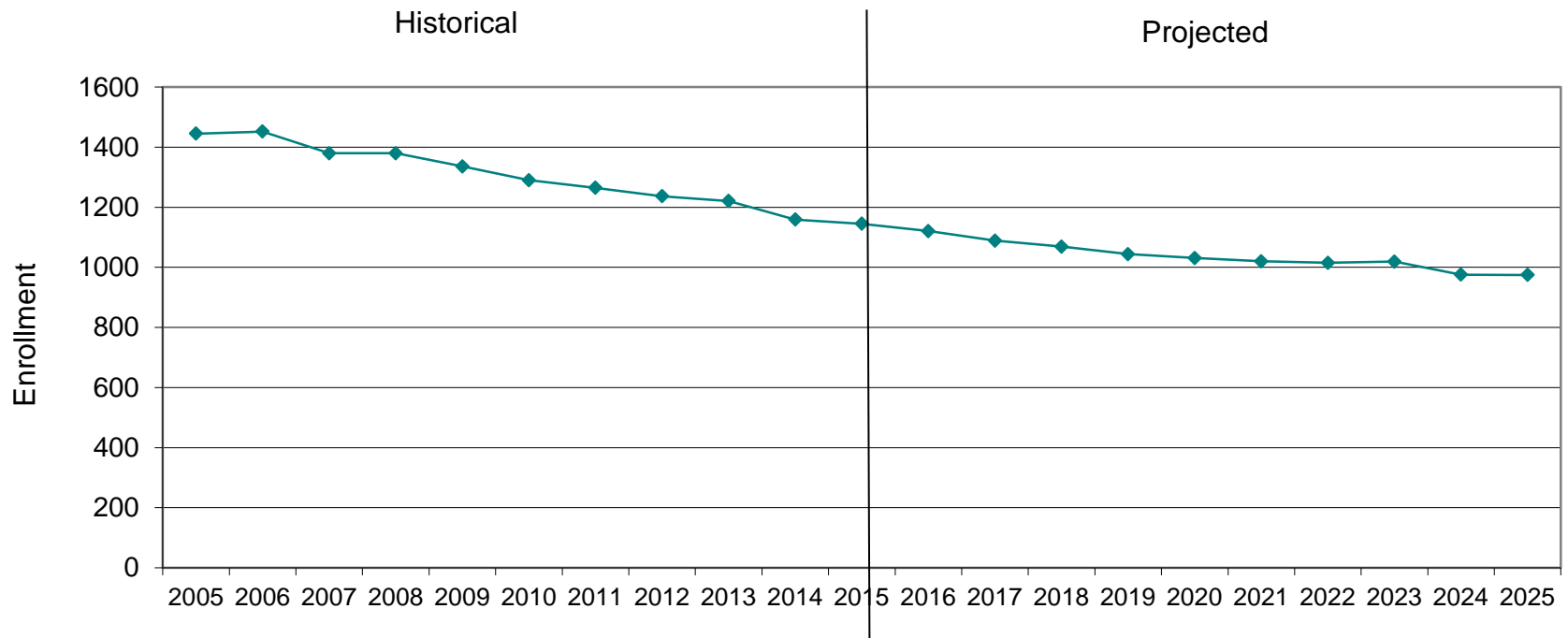
# SAU #36 Projected Enrollment

PK-12 TO 2025 Based On Data Through School Year 2015-16

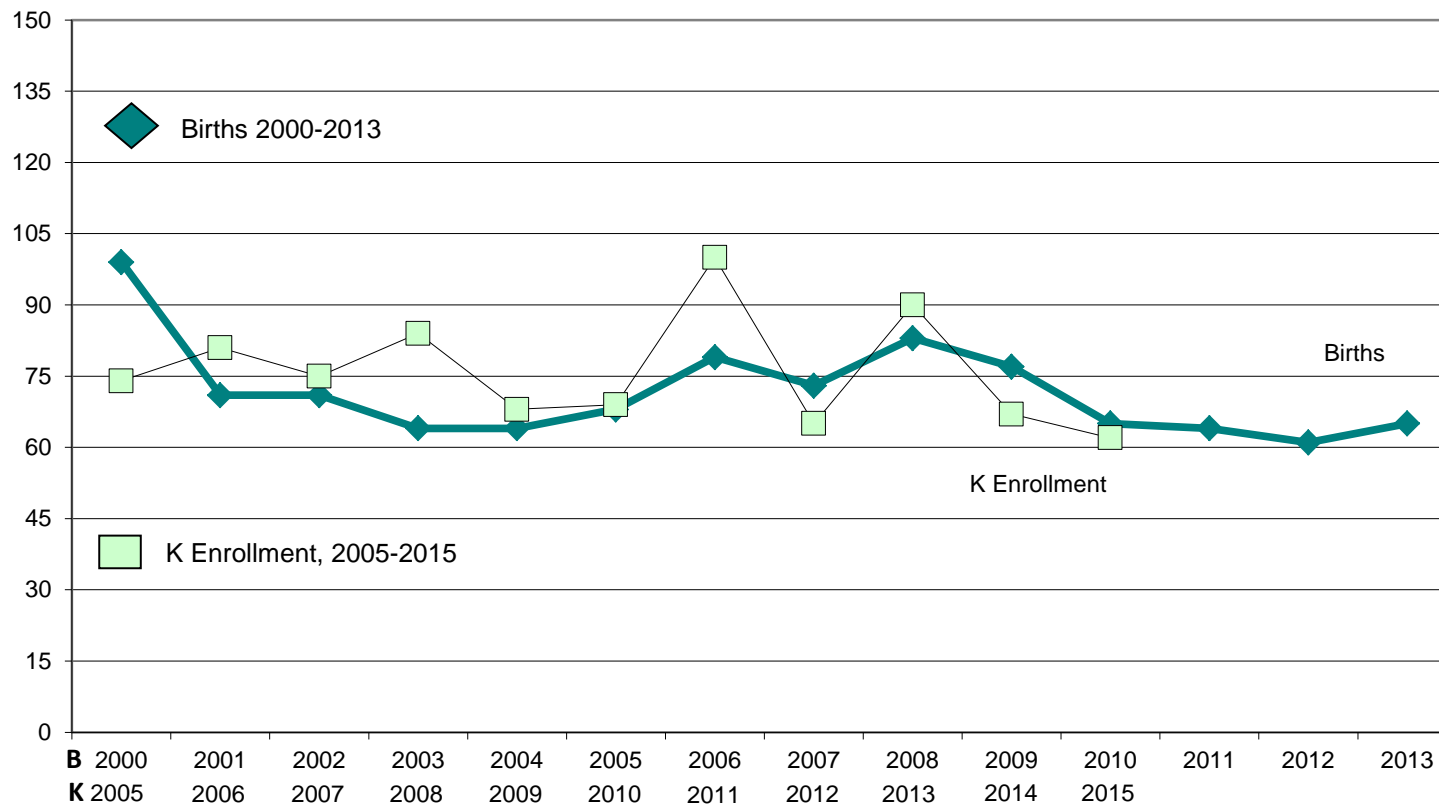


# SAU #36 Historical & Projected Enrollment

**PK-12, 2005-2025**



# SAU #36 Birth-to-Kindergarten Relationship



# SAU #36 Additional Data

Coos County Building Permits Issued (regional residential construction)		
Year	Single-Family	Multi-Units
2005	124	2
2011	28	8
2012	37	33
2013	34	0
2014	50	6
2015	33	0

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	n/a	n/a
2011-12	n/a	n/a
2012-13	n/a	n/a
2013-14	n/a	n/a
2014-15	n/a	n/a
2015-16	n/a	n/a

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of Oct. 1	K	1	2	3	4	5	6	7	8	9	10	11	12	K-12 TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	n/a

K-12 Home-Schooled Students	
2013*	53

K-12 Residents "Choiced-out" or in Charter or Magnet Schools	
2015	n/a

K-12 Special Education Outplaced Students	
2015	n/a

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2015	n/a

\* Recent data not available

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.