



2015-16 Enrollment Projections

TO: Mr. Sean McMannon, Superintendent of Schools, Winooski School District #17, VT
FROM: Donald G. Kennedy, Ed.D., Demographic Specialist
DATE: October 26, 2015
RE: Enrollment Projections

We are pleased to send you the enclosed documents displaying the past, present, and projected enrollments for the Winooski School District. 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.

Winooski 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. However we can describe two factors now at work which will have the greatest effect upon future enrollments: a. the number of births to Winooski residents and, to a greater degree, b. the return of in-migration (which had slowed, due to the real estate slowdown). In the decade from 2000-2009, Winooski averaged 91 births per year; recently (and expected over the next 6-7 years) are about 97-124 births annually...averaging about 20 more 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. 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 (RI 5.4% unemployment as of September 2015; CT 5.2%; US non-farm unemployment 5.1% (US

unemployment was above 10% during the Great Recession); New England average 4.7%; MA 4.6%; ME 4.4%; **VT 3.7%**; and NH 3.4% - other nearby states: NJ 5.6%; PA 5.3%; NY 5.1%).

The ever-changing relationship between Winooski births and Kindergarten enrollments is displayed on the B-K graph. Winooski, over the past seven years, has registered about 69 Kindergarteners for every 100 births (five years previous), a relationship which has been decreasing, this fall there were only 49 Kindergarteners for every 100 births five-years-previous. Note, however, that in 2009 there were 100 Kindergarteners for every 100 births. Projection ratios have been adjusted to match Winooski's most recent enrollment history. Grade 1 is expected to be about 12% smaller than the previous year's Kindergarten class.

Like many nearby communities Winooski continues to experience enrollment fluctuations of in/out-migration in Grades 1-8 (Grades 9-12 are excluded from this calculation, as there sometimes is an 11% decrease in Grade 9 for reasons that have little to do with families moving out of Winooski). **See below the paragraph describing "Hidden Trends within the District - the "Grades 1-8 stability" - which the past three school years has included -1.5% net out-migration of families from the Winooski Public Schools, but an in-migration of +5.9 in 2014-15) – at grade levels which more commonly experience stability.**

Looking back to Winooski's recent past, we note three Kindergarten years with 70+ students, compared with 48 Kindergarteners in the current group. As these classes rise through the grades, the peaks and valleys will affect the overall school totals. Over the next three years, K-5 enrollments are forecast to decrease by a total of 2 students; Grades 6-8 to decrease by 3 pupils; and the high school level to increase by about 27 pupils...all within the next three years. After that point these projections show declining enrollment in Grades K-5 of 11 children, combined with slight decreases at Grades 6-8 and 9-12 – as classes work their way up through the grades. The high school is expected to show enrollment spikes, as some grades are larger than others. 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 in Years #1-5; and less reliable in Years #6-10. As soon as the economy and real estate situation become more stable in the region, additional in-migration may occur in Winooski.

Many communities in the region sold during 2008-2013 only about 60-80% as many homes as in 2003-2007. **As additional families move in, any forecasted declines may moderate.** See the description on Page 4 below regarding "reliability of projections". The birth numbers used in the projections, through 2013, are from the VT

Department of Public Health. The “estimated” years, beginning with 2014 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 birth information, however do not have access to the numbers of Winooski residents born out-of-state (information which will eventually become known to the VT 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.**

“Hidden Trends” within the district: We know that Winooski 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 450 children in Year #1, the Grade 2-8 total in Year #2 typically would be approximately 450 - 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. Winooski's data reveals a slight increasing trend toward “net in-migration”. **In 2014-15, the 377 children in Grades 2-8 were 2 children less than the 379 who had been in Grades 1-7 during the 2013-2014 year. Lastly, in 2015-2016, the 401 children in Grades 2-8 were 22 more students than those who had been in Grades 1-7 during the previous year – note the “net move-ins”. This increasing in-migration in grades that typically are stable in numbers - provides an additional reliable benchmark by which to assess enrollment trends.**

Will new families be moving into our school district? Everyday across America, 10,000 “Baby Boomers” celebrate their 65th 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 7th 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.



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 8.0:

1. Click on Tools Menu;
2. Choose “Select & Zoom;”
3. Choose “Snapshot Tool;”
4. 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;
5. Click in the document where you would like the information to appear;*
6. 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. 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.

Winooski, VT Historical Enrollment

School District: Winooski, VT District #17

10/8/2015

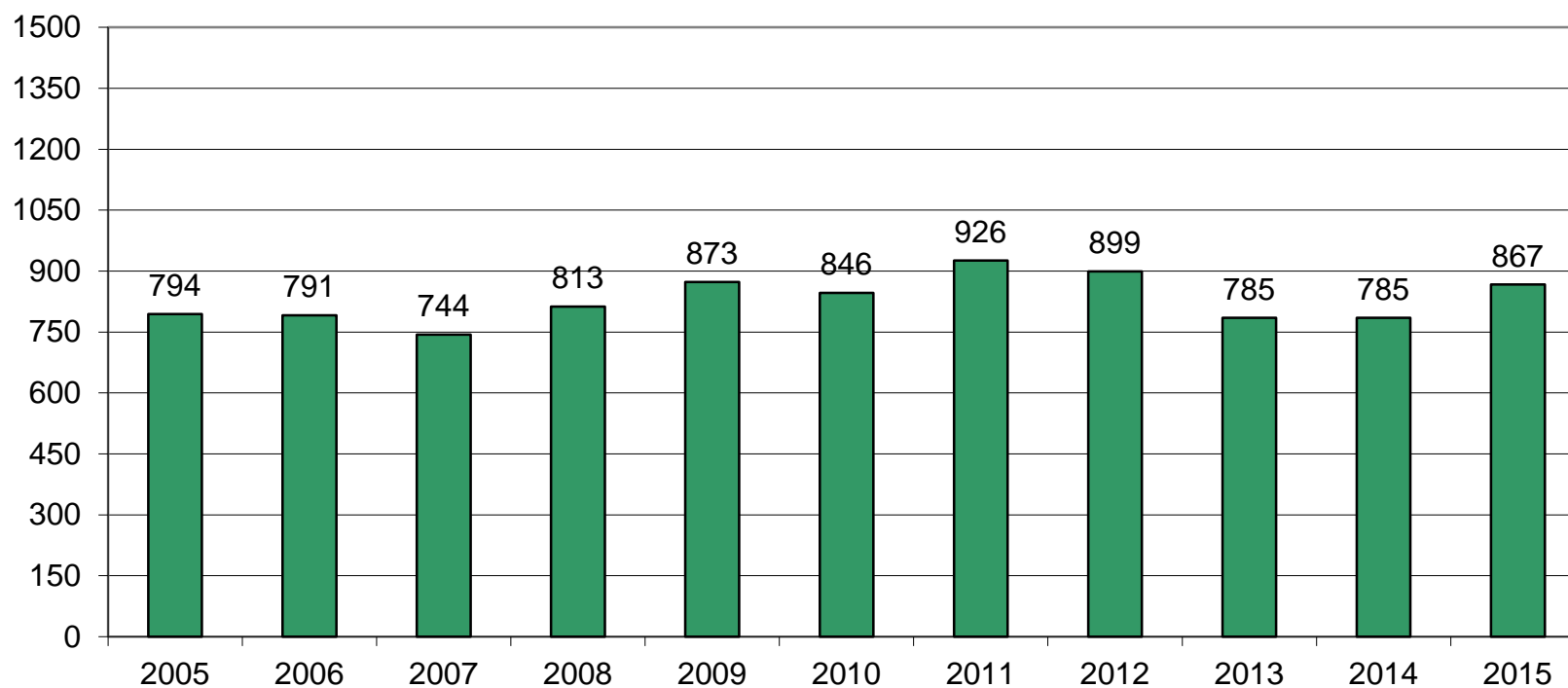
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2000	90	2005-06	68	57	51	54	45	48	59	52	58	61	82	38	48	44	29	726	794
2001	79	2006-07	73	52	65	48	46	48	51	59	54	55	86	57	42	35	20	718	791
2002	77	2007-08	63	57	56	60	45	43	48	40	55	55	63	64	47	31	17	681	744
2003	77	2008-09	69	76	58	53	56	44	58	54	46	63	69	64	48	30	25	744	813
2004	73	2009-10	70	73	73	61	57	56	41	68	51	52	107	50	49	33	32	803	873
2005	77	2010-11	86	61	66	65	61	55	56	35	61	45	40	54	69	47	45	760	846
2006	117	2011-12	90	72	59	58	65	60	52	58	36	63	53	59	76	66	59	836	926
2007	88	2012-13	93	65	69	55	63	61	63	50	61	44	60	48	66	66	35	806	899
2008	130	2013-14	57	69	58	57	55	54	54	55	46	56	41	67	46	40	30	728	785
2009	101	2014-15	57	69	58	57	55	54	54	55	46	56	41	67	46	40	30	728	785
2010	97	2015-16	115	48	63	65	63	60	52	53	56	52	56	56	45	27	56	752	867

Historical Enrollment in Grade Combinations									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2005-06	382	314	366	485	230	171	119	331	212
2006-07	383	310	369	478	219	168	109	329	220
2007-08	372	309	349	459	198	150	110	315	205
2008-09	414	345	399	508	221	163	109	320	211
2009-10	431	361	429	532	212	171	103	342	239
2010-11	450	364	399	505	197	141	106	316	210
2011-12	456	366	424	523	209	157	99	353	254
2012-13	469	376	426	531	218	155	105	345	240
2013-14	404	347	402	504	211	157	102	296	194
2014-15	404	347	402	504	211	157	102	296	194
2015-16	466	351	404	512	213	161	108	292	184

Historical Percentage Changes			
Year	K-12	Diff.	%
2005-06	726	0	0.0%
2006-07	718	-8	-1.1%
2007-08	681	-37	-5.2%
2008-09	744	63	9.3%
2009-10	803	59	7.9%
2010-11	760	-43	-5.4%
2011-12	836	76	10.0%
2012-13	806	-30	-3.6%
2013-14	728	-78	-9.7%
2014-15	728	0	0.0%
2015-16	752	24	3.3%
Change		26	3.6%

Winooski, VT Historical Enrollment

PK-12, 2005-2015



Winooski, VT Projected Enrollment

School District: Winooski, VT District #17

10/8/2015

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	97		2015-16	115	48	63	65	63	60	52	53	56	52	56	56	45	27	56	752	867
2011	106		2016-17	115	60	42	62	67	62	57	50	49	61	46	77	43	31	56	763	878
2012	124		2017-18	115	71	53	41	63	65	59	55	46	53	54	63	59	30	56	768	883
2013	120		2018-19	115	68	63	52	42	62	62	57	51	50	47	74	49	41	56	774	889
2014	102	(prov.)	2019-20	115	58	60	62	53	41	59	59	53	56	44	64	57	34	56	756	871
2015	110	(est.)	2020-21	115	63	51	59	63	52	39	57	55	58	50	60	49	39	56	751	866
2016	112	(est.)	2021-22	115	64	56	50	60	62	49	37	53	60	52	69	46	34	56	748	863
2017	114	(est.)	2022-23	115	65	56	55	51	59	59	47	34	58	53	71	53	32	56	749	864
2018	112	(est.)	2023-24	115	64	57	55	56	50	56	57	43	37	52	73	55	36	56	747	862
2019	110	(est.)	2024-25	115	63	56	56	56	55	47	54	53	47	33	71	56	38	56	741	856
2020	111	(est.)	2025-26	115	63	56	55	57	55	52	45	50	58	42	45	55	39	56	728	843

*Projections should be updated on an annual basis.



Based on an estimate of births



Based on children already born



Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2015-16	299	351	404	512	213	161	108	292	184
2016-17	293	350	400	510	217	160	110	307	197
2017-18	293	352	407	506	213	154	99	305	206
2018-19	287	349	406	507	220	158	101	312	211
2019-20	274	333	392	501	227	168	109	308	199
2020-21	288	327	384	497	209	170	113	311	198
2021-22	292	341	378	491	199	150	113	314	201
2022-23	286	345	392	484	198	139	92	301	209
2023-24	282	338	395	475	193	137	80	296	216
2024-25	286	333	387	487	201	154	100	298	198
2025-26	286	338	383	491	205	153	108	289	181

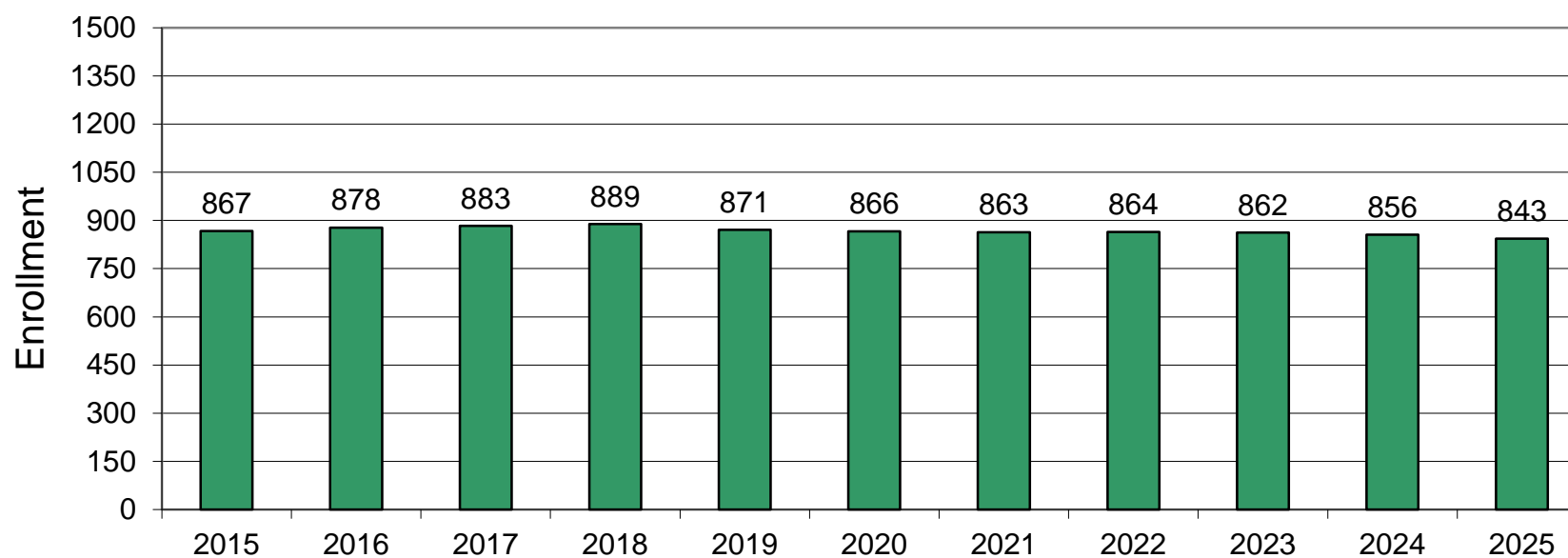
See "Reliability of Enrollment Projections" section of accompanying letter.

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	752	0	0.0%
2016-17	763	11	1.5%
2017-18	768	5	0.7%
2018-19	774	6	0.8%
2019-20	756	-18	-2.3%
2020-21	751	-5	-0.7%
2021-22	748	-3	-0.4%
2022-23	749	1	0.1%
2023-24	747	-2	-0.3%
2024-25	741	-6	-0.8%
2025-26	728	-13	-1.8%
Change		-24	-3.2%

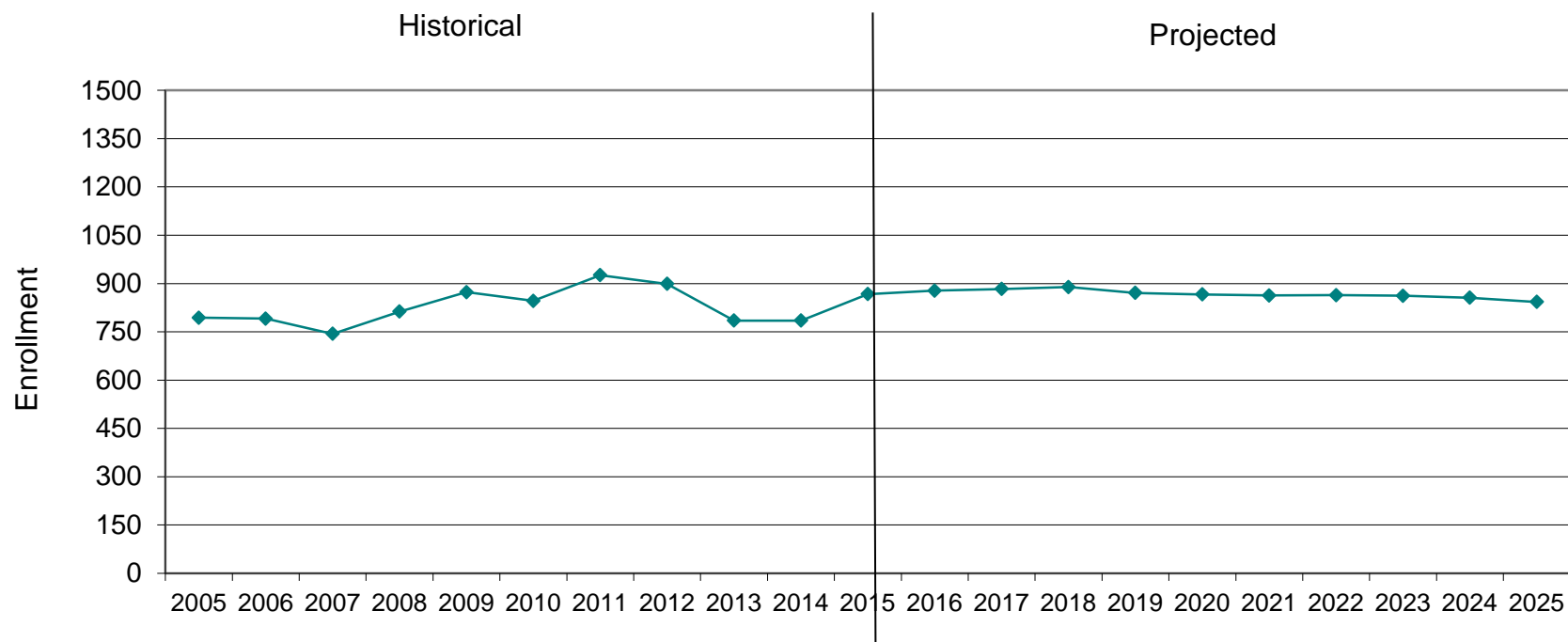
Winooski, VT Projected Enrollment

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

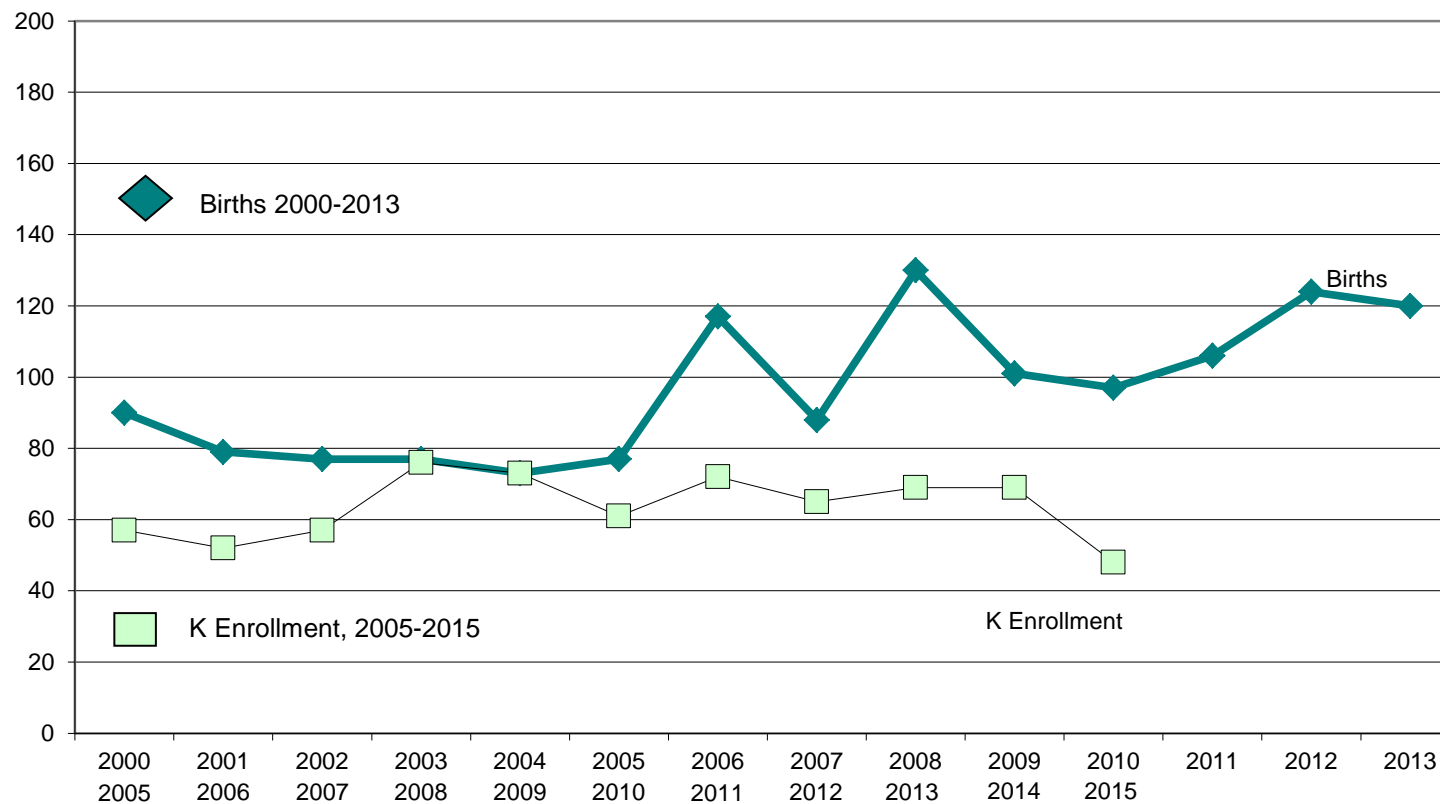


Winooski, VT Historical & Projected Enrollment

PK-12, 2005-2025



Winooski, VT Birth-to-Kindergarten Relationship



Winooski, VT Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	1	0
2011	2	0
2012	2	0
2013	2	0
2014	3	0
2015	n/a	n/a

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	n/a	40
2011-12	n/a	68
2012-13	n/a	72
2013-14	n/a	61
2014-15	n/a	58
2015-16	n/a	20*

*Plus 27 ungraded

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
	1	0	1	0	0	1	2	4	0	2	3	4	2	20*

*Plus 27 ungraded

K-12 Home-Schooled Students	
2015	n/a

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

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