To: Susan M. Swartz, Superintendent of Schools From: Steven B. Zautner, Enrollment Consultant

Date: December 1, 2022
Re: Enrollment Projections

Executive Summary:

The first step in any school district's long range planning process is determining how many students need to be educated in each grade and building. The way to do that is to implement a data driven enrollment projection model that can provide, within a reasonable margin of error, an accurate multi-year enrollment forecast. That forecast was completed for the 2022-23 school year last May, but has now been updated with actual 2022-23 school year data for a 2023-24 school year projection and beyond.

I have again used the Modified Cohort Survival Method to arrive at these updated projections. This methodology uses historical data showing the "survival rate" of students born within the District's boundaries 5 years prior who "survive" to attend kindergarten, students who attended kindergarten last year who "survive" to attend 1st Grade this year, and so on. The "modified" part of this methodology simply means that multi-year average survival rates are used to smooth out one year anomalies in the data to make the future projections more accurate. It has been found over time that this methodology will typically provide enrollment projections accurate to within +/- 2%. In fact, the 2022-23 projection was accurate to 0.41%, or within 9 students.

As a reminder, this enrollment projection methodology has some limitations that should be considered before these projections are accepted as reasonable and used for planning purposes. First, if there is a significant change in new construction expected within the District during the projection period, this method will not reflect it. For example, if a developer were to begin construction on a new development of 100 new 4 bedroom homes, it could reasonably be expected that those new homes could provide as many as 200 new students for the District. However, this new development would not be picked up in the prior data used to project enrollment going forward. For that reason, it is a good idea to maintain an open line of communication with the municipalities within the District's boundaries to know about any future planned development in advance. I have not included any consideration for new construction in this projection. Second, enrollment can be effected by the opening or closing of new Charter or Private Schools in or near the District. If parents have other options, the rate that they exercise those options will influence District enrollment. Third, a significant change in program can also alter enrollment trends. One example of this would be if a public school were to change from a half-day to a full-day kindergarten program. This change might persuade more parents to send their children to the local public elementary school instead of to a private school full-day program. And lastly, as has been seen over the past few school years, a global pandemic that prevents normal school operations can also affect school District enrollments. Globally, Parents made decisions about where to send their children to school based on factors that had not previously been part of their decision making process. As public schools returns to something resembling "normal" operations post pandemic, enrollment may be further affected.

In November, I was provided with 2022-23 school year BEDS enrollment data. I attained birth data for the Scotia-Glenville Central School District from the Bureau of Biometrics of the NYS Department of Health. District specific birth data became available in 2007 for the 2002 calendar year and subsequent years. This District specific birth data shows an average of 171 live births from 2010 through 2019 (the most recent 10 years of available data), with annual data falling in a narrow band from a low of 149 live births in 2019 to a high of 190 live births in 2012. Data after 2019 is still not yet available from New York State, so the Trend function of Microsoft Excel was used to estimate birth data for 2020 through 2028 to complete the 10 year forecast. For this reason, the level of confidence in the accuracy of the forecast declines the farther out into the future we look.

Birth Data for Scotia-Glenville Central Schools

2006	190
2007	175
2008	172
2009	173
2010	183
2011	160
2012	190
2013	168
2014	150
2015	184
2016	171
2017	173
2018	183
2019	149
2020	Not available yet
2021	Not available yet

Projected Enrollment

<u>Year</u>	<u>K-5</u>	<u>6-8</u>	<u>9-12</u>	Total	Diff.	% Diff.
2023-24	963	507	727	2197	-15	-0.68%
2024-25	923	504	712	2139	-58	-2.69%
2025-26	938	512	677	2127	-12	-0.56%
2026-27	941	471	676	2088	-39	-1.83%
2027-28	932	467	684	2083	-5	-0.24%
2028-29	939	463	657	2059	-24	-1.15%
2029-30	922	494	640	2056	-3	-0.15%
2030-31	945	458	642	2045	-11	-0.54%
3031-32	923	477	618	2018	-27	-1.32%
3032-33	946	450	627	2023	+5	-0.25%

Comparison of 2022-23 Projections and 2022-23 Actual Enrollments

The projections completed last May for 2022-23 predicted total District enrollment of 2,221 students. Actual enrollment was 2,212 students, 9 fewer than forecast. This difference breaks down as follows: Grades K-5 enrollment was 972 students, exactly what was predicted. Grades 6-8 enrollment was 504 students, 8 more than were projected. Grades 9-12 enrollment was 736 students, 17 fewer than projected.

The updated enrollment projection predicts that total district enrollment in 2023-24 will decrease by 15 students from 2,212 in the 2022-23 school year to 2,197, as the smallest graduating class in more than 10 years leaves and a relatively large Kindergarten group enters. Under the current projections, K-5 enrollment will decrease by 9 students to 963 students, Grade 6-8 enrollment will increase by 3 students to 507 students, and Grade 9-12 enrollment will decrease by 9 students to 727 students.

As can be seen in the chart, K-5 enrollment is projected to stay within the range of 922 and 963 students through the 2032-33 school year. Grade 6-8 enrollment is projected to remain above 500 students until 2025-26, then decline to only 450 students by 2032-33. Grades 9-12 projected enrollment is projected to decline significantly over the next ten years to only 627 students by 2032-33. Total District enrollment is projected to drop from the current enrollment of 2,212 students to 2,023 students by the 2032-33 school year, a decline of nearly 200 students.

Since the 2011-12 school year, total District enrollment has fallen from 2,677 to 2,212 in 2022-23. The overall decline of 465 students (decrease of 17.37%) was made up of a decrease of 220 students (decrease of 19.7%) at the Grades K-5 level, a Grades 5-8 enrollment decline of 97 students (decrease of 16.1%), and a Grades 9-12 decline of 148 students (decrease of 16.7%). In 2020-21, a decline of 85 students occurred, but most of that decline (63 students) took place at the Grade K-5 level. This is similar to what many suburban districts experienced in the 2020-21, as the COVID-19 global pandemic forced parents of young children to make decisions on their child's education based on new factors, such as their level of comfort with masking and social distancing, their ability to work from home, their child's ability to participate in remote learning, and their lack of reliable daycare options. The 2021-22 school year data showed a much smaller decline of only 17 students District-wide. 2022-23 enrollment showed an increase of 15 students at the Grades K-5 level (students returning from home schooling?), a decline of 26 students in Grades 6-8, and a drop of 46 students in Grades 9-12.

CC: Karen Swain, Assistant Superintendent for Curriculum and Instruction Andrew M. Giaquinto, Assistant Superintendent for Business

Attachments:

Enrollment Report and Projections Spreadsheet Elementary Enrollment by School and Grade

Scotia-Glenville Central School District Enrollment Report and Projections Modified Cohort Survival Projection Method Prepared by Steven Zautner

	Birth Data		Survivor			Survivor	-	Survivor	-	Survivor		Survivor		Survivor		Survivor																	
	5 rs prior	K	Ratio	1	Ratio	2	Ratio	3	Ratio	4	Ratio	5	Ratio	6	Ratio	UGE	7	Ratio	8	Ratio	9	Ratio	10	Ratio	11	Ratio	12	Ratio	UGS	Total	K-5	6-8	9-12 Total
2011-2012	190	195	1.026	186		203		204		195		199		188		10	212		201		225		207		226		223		3	2677	1192	601	884 2677
2012-2013	175	171	0.977	201	1.031	176	0.946	205	1.010	203	0.995	195	1.000	201	1.010	5	193	1.027	213	1.005	210	1.045	213	0.947	175	0.845	234	1.035	4	2599	1156	607	836 2599
2013-2014	172	166	0.965	170	0.994	199	0.990	175	0.994	209	1.020	205	1.010	190	0.974	2	208	1.035	199	1.031	226	1.061	195	0.929	195	0.915	184	1.051	4	2527	1126	597	804 2527
2014-2015	173	154	0.890	180	1.084	168	0.988	201	1.010	182	1.040	216	1.033	210	1.024	2	193	1.016	205	0.986	212	1.065	217	0.960	173	0.887	199	1.021	5				806 2517
2015-2016	183	176	0.962	164	1.065	182	1.011	165	0.982	202	1.005	184	1.011	214	0.991	3	206	0.981	192	0.995	229	1.117	195	0.920	191	0.880	173	1.000	6				794 2482
2016-2017	160	145	0.906	179	1.017	172	1.049	181	0.995	162	0.982	195	0.965	191	1.038	6	213	0.995	199	0.966	204	1.063	205	0.895	182	0.933	191	1.000	9	2434	1040	603	791 2434
2017-2018	190	168	0.884	151	1.041	184	1.028	176	1.023	189	1.044	169	1.043	205	1.051	5	196	1.026	215	1.009	207	1.040	194	0.951	192	0.937	188	1.033	12				793 2451
2018-2019	168	179	1.065	179	1.065	144	0.954	175	0.951	168	0.955	184	0.974	173	1.024	-	211	1.029	200	1.020	225	1.047	198	0.957	187	0.964	200	1.042					822 2438
2019-2020	150	153	1.020	183	1.022	186	1.039	148	1.028	176	1.006	178	1.060	181	0.984	_	176	1.017	210	0.995	194	0.970	209	0.929	174	0.879	190	1.016	11				778 2371
2020-2021	184	142	0.772	145	0.948	176	0.962	180	0.968	142	0.959	176	1.000	174	0.978	_	176	0.972	170	0.966	214	1.019	193	0.995	194	0.928	190	1.092	12	2286	963		803 2286
2021-2022	171	168	0.982	140	0.986	151	1.041	170	0.966	177	0.983	147	1.035	179	1.017		172	0.989	179	1.017	201	1.182	203	0.949	171	0.886	196	1.010	11	2269	957		782 2269
2022-2023	173	153	0.884	175	1.042	136	0.971	155	1.026	176	1.035	175	0.989	149	1.014	2	182	1.017	173	1.006	191	1.067	181	0.900	182	0.897	172	1.006	10	2212	972	504	736 2212
	3 YR AVG		0.880		0.992		0.992		0.987		0.993		1.008		1.003			0.993		0.996		1.089		0.948		0.904		1.036		0.986			
	7 YR AVG		0.880		1.017		1.006		0.994		0.995		1.009		1.005			1.007		0.997		1.055		0.939		0.904		1.038		0.993			
	Optimistic		0.931		1.020		1.010		0.995		1.000		1.010		1.015			1.010		1.000		1.090		0.950		0.920		1.028		0.999			
	Pessimistic		0.880		0.980		0.990		0.985		0.990		1.000		1.000			0.990		0.990		1.050		0.930		0.900		1.025		0.978			
	Median		0.910		1.000		1.000		0.99		0.995		1.005		1.010			1.000		0.995		1.070		0.940		0.910		1.03		0.989			
	Wicaiaii		0.510		1.000		1.000		0.55		0.555		1.003		1.010			1.000		0.555		1.070		0.540		0.510		1.03		0.505			
2023-2024	183	167	0.910	153	1.000	175	1.000	135	0.990	154	0.995	177	1.005	177	1.010	2	149	1.000	181	0.995	185	1.070	180	0.940	165	0.910	187	1.030	10	2197	963	507	727 2197
2024-2025	149	139	0.910	167	1.000	153	1.000	173	0.990	134	0.995	155	1.005	179	1.010	2	177	1.000	148	0.995	194	1.070	174	0.940	164	0.910	170	1.030	10	2139	923	504	712 2139
2025-2026	184	172	0.910	139	1.000	167	1.000	151	0.990	172	0.995	135	1.005	157	1.010	2	179	1.000	176	0.995	158	1.070	182	0.940	158	0.910	169	1.030	10	2127	938	512	677 2127
2026-2027	150	140	0.910	172	1.000	139	1.000	165	0.990	150	0.995	173	1.005	136	1.010	2	157	1.000	178	0.995	188	1.070	149	0.940	166	0.910	163	1.030	10	2088	941	471	676 2088
2027-2028	177	165	0.910	140	1.000	172	1.000	138	0.990	164	0.995	151	1.005	175	1.010	2	136	1.000	156	0.995	190	1.070	177	0.940	136	0.910	171	1.030	10	2083	932	467	684 2083
2028-2029	171	160	0.910	165	1.000	140	1.000	170	0.990	137	0.995	165	1.005	153	1.010	2	175	1.000	135	0.995	167	1.070	179	0.940	161	0.910	140	1.030	10	2059	939	463	657 2059
2029-2030	159	149	0.910	160	1.000	165	1.000	139	0.990	169	0.995	138	1.005	167	1.010	2	153	1.000	174	0.995	144	1.070	157	0.940	163	0.910	166	1.030	10	2056	922	494	640 2056
2030-2031	174	163	0.910	149	1.000	160	1.000	163	0.990	138	0.995	170	1.005	139	1.010	2	167	1.000	152	0.995	186	1.070	135	0.940	143	0.910	168	1.030		2045	945		642 2045
	160																																
2031-2032		150	0.910	163	1.000	149	1.000	158	0.990	162	0.995	139	1.005	172	1.010		139	1.000	166	0.995	163	1.070	175	0.940	123	0.910	147	1.030	10	2018			618 2018
2032-2033	174	163	0.910	150	1.000	163	1.000	148	0.990	157	0.995	163	1.005	140	1.010	2	172	1.000	138	0.995	178	1.070	153	0.940	159	0.910	127	1.030	10	2023	946	450	627 2023