

**GLENBROOK HIGH SCHOOLS
District Business Office**

TO: Dr. Mike Riggle
FROM: Kimberly Ptak
DATE: MARCH 17, 2014
RE: STUDENT ENROLLMENT PROJECTIONS - DEMOGRAPHERS

Background

Every fall, district administration does a 5-year enrollment projection using October 1 fall housing data from the feeder elementary districts.

To provide validation of the district projections and a series of longer range, 10-year, projections, the district hired two, independent, demographers, Dr. Charles Kofron and Dr. Jerome McKibben. Dr. Kofron and Dr. McKibben use different methodologies for their projections and will share their methodologies and overall projections at the March 17th board meeting.

Attached is the following information:

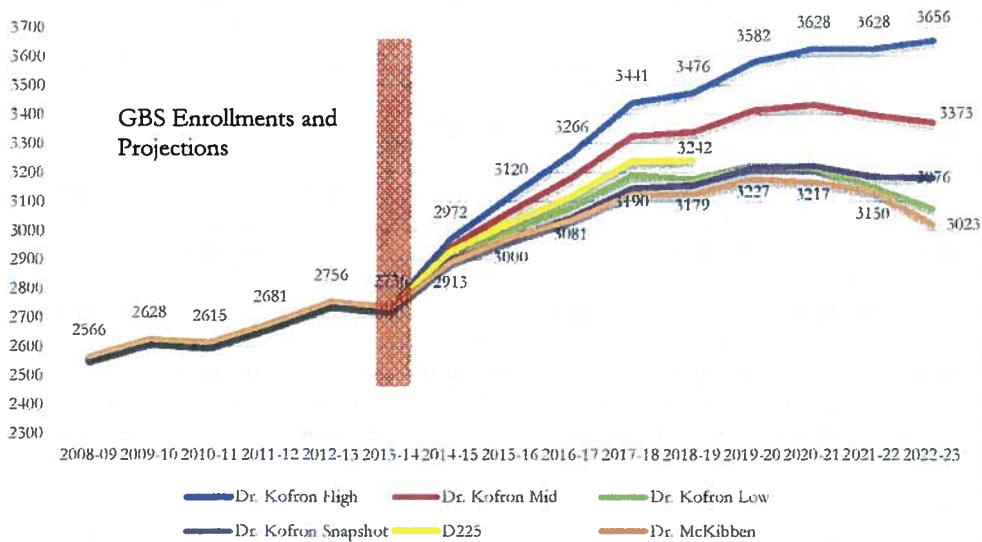
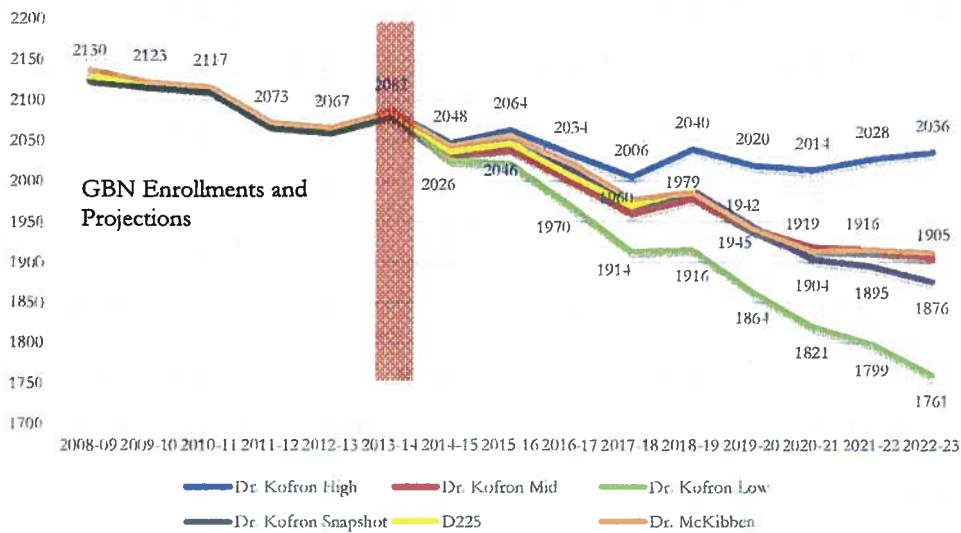
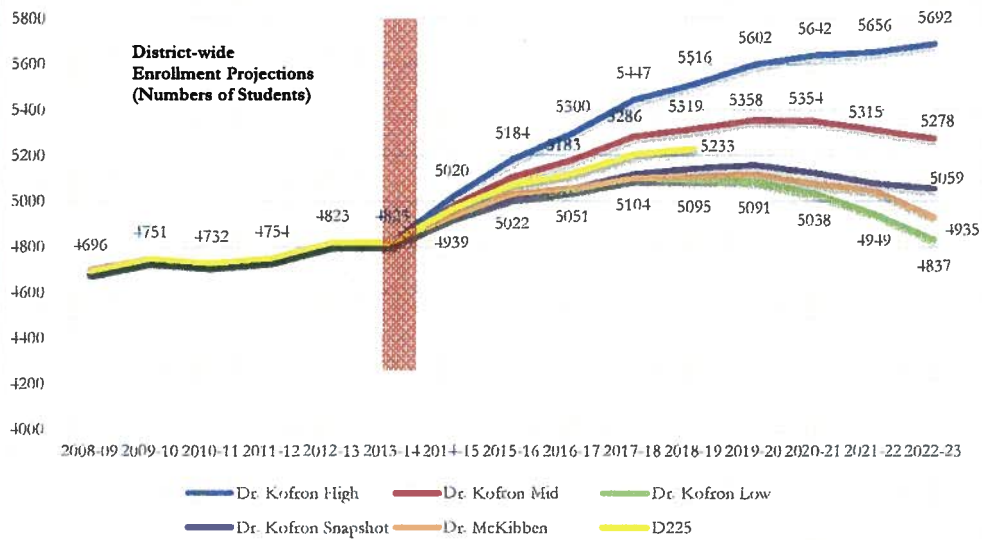
1. Summary of various enrollment projections
2. Dr. Kofron's biography
3. Dr. McKibben's biography
4. Dr. Kofron's executive summary
5. Dr. McKibben's executive summary

Summary of Projections

	DISTRICT-WIDE					
	Glenbrook 225	Dr. MiKibben	Dr. Kofron	Dr. Kofron	Dr. Kofron	Dr. Kofron
	<u>Projection</u>	<u>Projection</u>	<u>1 year Snap Shot</u>	<u>Low</u>	<u>Mid</u>	<u>High</u>
2014/15	4,967	4,936	4,937	4,939	4,980	5,020
2015/16	5,074	5,033	5,018	5,022	5,108	5,184
2016/17	5,124	5,060	5,059	5,051	5,183	5,300
2017/18	5,208	5,103	5,120	5,104	5,286	5,447
2018/19	5,233	5,112	5,146	5,095	5,319	5,516
2019/20	n/a	5,120	5,162	5,091	5,358	5,602
2020/21	n/a	5,081	5,128	5,038	5,354	5,642
2021/22	n/a	5,051	5,081	4,949	5,315	5,656
2022/23	n/a	4,935	5,059	4,837	5,278	5,692
2023/24	n/a	4,790	n/a	n/a	n/a	n/a

	GLENBROOK NORTH					
	Glenbrook 225	Dr. MiKibben	Dr. Kofron	Dr. Kofron	Dr. Kofron	Dr. Kofron
	<u>Projection</u>	<u>Projection</u>	<u>1 year Snap Shot</u>	<u>Low</u>	<u>Mid</u>	<u>High</u>
2014/15	2,037	2,044	2,038	2,026	2,035	2,048
2015/16	2,047	2,057	2,046	2,022	2,041	2,064
2016/17	2,007	2,023	2,014	1,970	2,000	2,034
2017/18	1,970	1,978	1,974	1,914	1,960	2,006
2018/19	1,991	1,986	1,989	1,916	1,979	2,040
2019/20	n/a	1,942	1,945	1,864	1,942	2,020
2020/21	n/a	1,914	1,904	1,821	1,919	2,014
2021/22	n/a	1,916	1,895	1,799	1,916	2,028
2022/23	n/a	1,912	1,876	1,761	1,905	2,036
2023/24	n/a	1,911	n/a	n/a	n/a	n/a

	GLENBROOK SOUTH					
	Glenbrook 225	Dr. MiKibben	Dr. Kofron	Dr. Kofron	Dr. Kofron	Dr. Kofron
	<u>Projection</u>	<u>Projection</u>	<u>1 year Snap Shot</u>	<u>Low</u>	<u>Mid</u>	<u>High</u>
2014/15	2,930	2,892	2,899	2,913	2,945	2,972
2015/16	3,027	2,976	2,972	3,000	3,067	3,120
2016/17	3,117	3,037	3,045	3,081	3,183	3,266
2017/18	3,238	3,125	3,146	3,190	3,326	3,441
2018/19	3,242	3,126	3,157	3,179	3,340	3,476
2019/20	n/a	3,178	3,217	3,227	3,416	3,582
2020/21	n/a	3,167	3,224	3,217	3,435	3,628
2021/22	n/a	3,135	3,186	3,150	3,399	3,628
2022/23	n/a	3,023	3,183	3,076	3,373	3,656
2023/24	n/a	2,879	n/a	n/a	n/a	n/a



Charles Kofron, Ph.D.
Biographical Statement

Charles Kofron, Ph.D. has provided geodemographic analysis, statistical consulting, and data technical services to school districts for over 20 years. He has teamed with a number of architectural, engineering, and public relations firms on public engagement projects for school district capital improvements and strategic planning. He has worked as a consultant for survey and polling companies on community surveys, exit polling, and voter and voting fraud cases. He has pioneered the use of geocoded vital statistic records in the development of cohort projections for school enrollments and has used geographic information systems technology for allocation and distribution analysis, statistical sampling, and neighborhood school analysis involving student residence and facility locations.

In addition to demographic consulting with school districts, Dr. Kofron has served as GIS Coordinator/Manager and 911 Director for St. Clair County, Illinois. He has worked with several school districts in the County on neighborhood and community studies and enrollment projections. Previously, he worked for CH2M-Hill as the GIS Program Manager and Systems Architect for the US Air Force, Air Mobility Command at Scott Air Force Base. He developed the Southwestern Illinois GIS Resource Center for the Southwestern Illinois RC&D and served as Director of the Center for Organizational Research and Development at Southern Illinois University Edwardsville. At SIUE, Dr. Kofron developed and maintained the GIS Laboratory in the Department of Geography, managed the Illinois State Data Center Cooperative, taught credit-producing courses in the departments of geography and sociology, and taught technical courses as an authorized Esri (Environmental Systems Research Institute) instructor. Before coming to SIUE, he was responsible for the preparation of local area population estimates for the US Census Bureau (Washington, DC).

Jerome N. McKibben

Ph.D. Bowling Green State University, 1990, Applied Demography. M.A. Syracuse University, 1982, Sociology. B.A. SUNY at Geneseo, 1981, History and Sociology.

Dr. McKibben is currently the Senior Demographer of McKibben Demographic Research. He specializes in population projections and estimates, demographic methodology, enrollment projections, boundary modifications and redistricting, site selections, demographic analysis and migration. He has successfully completed over 700 forecasting and estimates projects with populations ranging in size from 2,000 to 6,000,000 people.

His current research projects included the development of demographic methodologies for non-traditional populations, race and ethnic composition and the effect of household composition changes on small area population estimates and forecasts. Dr. McKibben has published articles in such journals as Population Research and Policy Review, Journal of Economic and Social Measurement, American Demographics and Voprosy Statistiki. He is also the author of 2 chapters in the recently published text The Methods and Materials of Demography; Race and Ethnic Composition and Urban/Rural Classification.

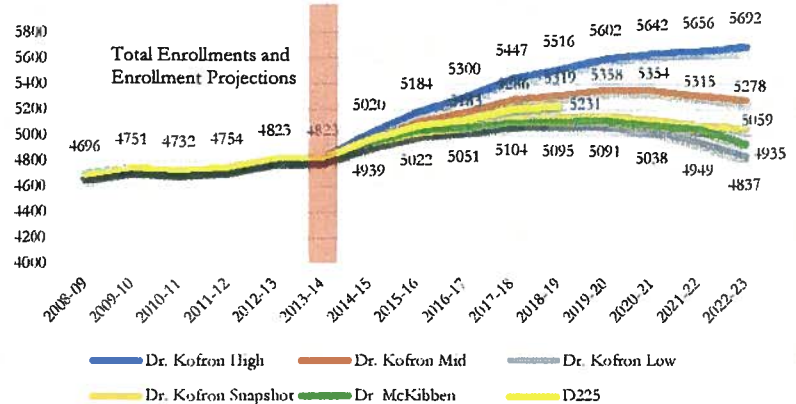
In addition to his work in applied demography, Dr. McKibben has also been a Fulbright Scholar, has testified before the U.S. Senate on census undercount issues and been a Visiting Professor of statistics at Helsinki School of Economics. He has also been a long time active member in both the Population Association of America and the Southern Demographic Association, including serving of the Applied Demography and Small Area Demography committees.

Formerly the State Demographer of Indiana, Dr. McKibben has also been a member of the Federal-State cooperative on Population Estimates and the Federal-State cooperative on Population Projections. He currently serves as a peer reviewer for the journal Population Research and Policy Review for articles pertaining to population projections and estimates and demographic methodology.

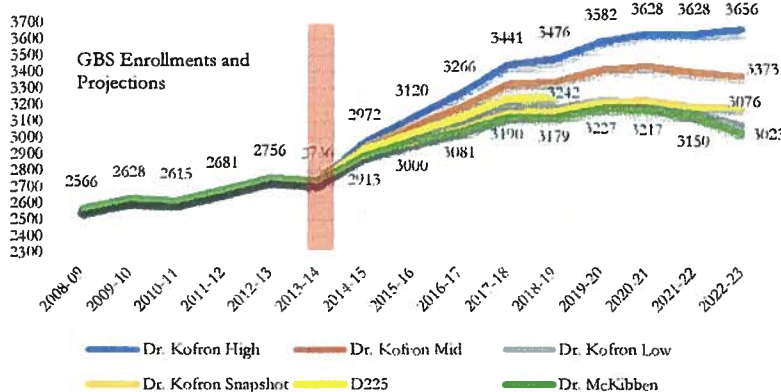
Enrollment Projections Study--Executive Summary

Four series of enrollment projections were developed to compare to the District's projections of enrollments for 2014 to 2018 and another independent series of enrollment projections for 2014 through 2023. All four series use cohort analysis to project enrollments by grade for the two high school attendance areas from 2014 through 2022. Enrollment data from the last 10 school years were obtained from feeder schools and the two high schools to establish class cohorts. High, mid, and low projections by grade were generated by applying different weighting methods to cohort survival ratios over the last 5 school years. A fourth series of projections used cohort survival ratios from the last two years of enrollments. Enrollment projections were generated by grade for the two high school attendance areas and summed to reflect district-wide totals.

All four series of projections are expecting enrollments to increase district-wide from 2014 through 2022. The low projection series is showing a very small gain of 14 students while the snapshot series or the series that uses only the last 2 years of enrollments is showing a gain of 236 students. The high and mid projection series are forecasting substantially larger numbers of students. The District's projection series tracks very closely to the snapshot projection over the next 4 years.

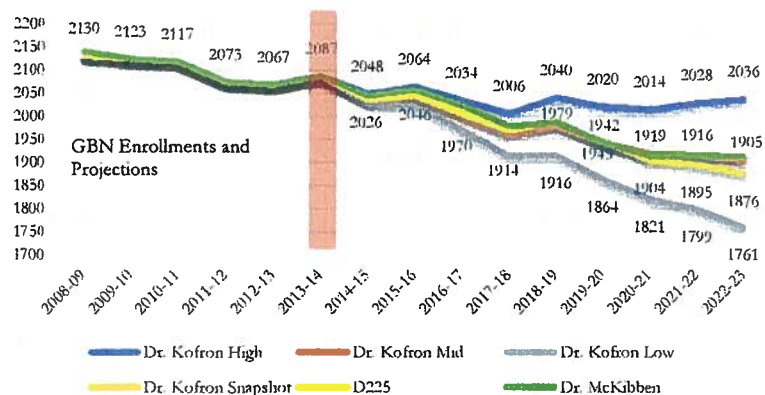


All four series of projections are showing similar trends at the high school attendance area level. It is expected that Glenbrook South



enrollments will increase and Glenbrook North enrollments will decline. The projected increase of District-wide enrollments of close to 5% (using the snapshot projection for 2022) is due to the strong enrollment increases in the Glenbrook South attendance area. There, the snapshot and mid projection series, respectively, are forecasting enrollments between 3,076 and 3,373 in 2022 which represents gains of between 10% and 23% over the projection interval. It appears that the District's projections are tracking in between the snapshot and mid projection trend lines where it is projected that the 2018 enrollments in Glenbrook South will increase by 18%.

The projection trend lines for Glenbrook North are heading in the opposite direction. The mid and snapshot projections are following almost the same path in projecting a decline of between 8% and 10% in Glenbrook North enrollments from 2014 to 2022. The convergence of the mid and snapshot trend lines suggests that last year's enrollments are indicative of average enrollment change in the Glenbrook North attendance area over the last 5 years.



Although there is a stark contrast between the directions of enrollments in the two high school attendance areas, there also appears to be a tendency for enrollments to begin to level off in the later years of the projection interval in the Glenbrook South attendance area. The projection trend lines are showing almost linear increases from 2014 to 2018. In 2019 and 2020, the trend line begins to moderate or plateau. Using the snapshot projection series, the increases in enrollments in Glenbrook South are projected to reach a high of 3,224 students in 2020 and then decline slowly to 3,076 students in 2022. The mid projection scenario is forecasting a similar trend with a positive difference of about 300 students. The tipping point in enrollments is reached a year earlier at the District level with the expected declines in the Glenbrook North attendance area.

Charles Kofron, Ph.D.

**EXECUTIVE SUMMARY FOR THE SPRING 2014 SERIES POPULATION AND
ENROLLMENT FORECASTS FOR THE GLENBROOK SCHOOL DISTRICT 225**

McKibben Demographic Research
March 2014

1. Glenbrook District 225's fertility rates over the life of the forecasts are below replacement levels. (Replacement level TFR=2.1 versus TFR=1.89 for the district)
2. Most of the in-migration to the district occurs in the 0-9 and 25-to-39 age groups.
3. The locally born 18-to-24 year old population continues to leave the district, going to college or moving to other urban areas.
4. The primary factor causing the district's enrollment to grow at a slower rate is the continued and growing rate of out-migration of the locally born 18-to-24 year old age group and the slowing in-migration of younger families.
5. Changes in year-to-year enrollment (particularly after 2019) largely will be due to smaller cohorts entering and moving through the system in conjunction with larger cohorts leaving the system.
6. With the general reduction in gross migration that the Chicago metropolitan area (and the rest of the nation) is experiencing, the mobility rates for all areas of the district will be lower over the next 10 years compared to the last decade.
7. Even as the in-migration of young families to the district continues to slow and larger grade cohorts graduate from the school system, total enrollment will grow until 2019. However, enrollment will increase at a slower rate than during the last several years, particularly after 2016

8. As the district continues to have lower levels of new home construction than was experienced in the 2000 to 2007 time period, the rate and magnitude of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change.
9. Areas that are already dependant on in migration via new home construction for future enrollment will experience net enrollment decline over time.
10. Total high school enrollment is forecasted to increase by 289 students, or 10.2%, between 2013-14 and 2018-19. Total high school enrollment will decline by 322 students, or -6.3%, from 2018-19 to 2023-2024.

Table 1: Household Characteristics by Elementary Districts, 2010 Census

	<u>HH w/ Pop Under 18</u>	<u>% HH w/ Pop Under 18</u>	<u>Total Households</u>	<u>Household Population</u>	<u>Persons Per Household</u>
Glenview 34	5267	35.2%	14956	39558	2.64
Northbrook 27	1313	31.1%	4222	10854	2.57
Northbrook/Glenview 30	1266	28.5%	4438	10868	2.45
Northbrook 28	1813	35.8%	5063	13404	2.65
W Northfield 31	1135	28.0%	4048	9685	2.39
Glenbrook North HS	4333	31.6%	13710	34756	2.54
Glenbrook South HS	6461	34.0%	19017	49613	2.61
Glenbrook Total	10794	33.0%	32727	84369	2.58

Table 2: Householder Characteristics by Elementary Area, 2010 Census

	<u>Percentage of Householders aged 35-54</u>	<u>Percentage of Householders aged 65+</u>	<u>Percentage of Householders Who Own Homes</u>
Glenview 34	41.8%	29.4%	81.1%
Northbrook 27	33.5%	36.3%	92.3%
Northbrook/Glenview 30	33.3%	41.0%	80.7%
Northbrook 28	41.4%	33.0%	88.7%
W Northfield 31	34.8%	36.0%	65.5%
Glenbrook North HS	36.0%	38.1%	88.0%
Glenbrook South HS	40.6%	29.7%	77.3%
Glenbrook Total	38.7%	33.2%	81.8%

**Table 3: Single Person Households and Single Person Households over
age 65 by Elementary Districts, 2010 Census**

	<u>Percentage of Single Person Households</u>	<u>Percentage of Single Person Households that are 65+</u>
Glenview 34	25.1%	13.2%
Northbrook 27	21.2%	13.8%
Northbrook/Glenview 30	26.2%	18.6%
Northbrook 28	22.1%	13.7%
W Northfield 31	28.8%	17.5%
Glenbrook North HS	24.2%	16.4%
Glenbrook South HS	25.1%	13.3%
Glenbrook Total	24.7%	14.6%

**Table 4: Age Under One to Age Ten Population Counts, by Year of Age, by
Elementary District and High School Area: 2010 Census**

	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
Glenview 34	364	405	413	490	579	572	647	613	659	663	655
Northbrook 27	79	91	93	111	108	123	138	120	146	140	140
Northbrook Glenview 30	78	73	99	91	103	116	129	143	154	149	146
Northbrook 28	103	121	135	143	157	166	195	206	217	221	205
W Northfield 31	86	82	91	90	90	108	110	112	116	93	101
Glenbrook North HS	262	281	328	339	348	404	452	455	496	493	482
Glenbrook South HS	448	491	503	586	689	681	767	739	796	773	765
Total	710	772	831	925	1037	1085	1219	1194	1292	1266	1247