

DEMOGRAPHIC STUDY
FOR THE
DENVER TOWNSHIP
SCHOOL DISTRICT

February 14, 2022



STATISTICAL FORECASTING

- Provide demographic services for school districts in the New York-New Jersey metropolitan area since 1998.
- Performed demographic studies for approximately 200 school districts in NY & NJ.
- Demographic consultant for the NYC Public Schools since 2006.

RICHARD S. GRIP ED.D.

- Executive Director
- Doctorate from Rutgers University
Graduate School of Education in Educational
Statistics and Measurement
- Numerous publications on school
demography and presentations nationally
- Testified as an expert witness in school
demography in several Administrative Law
court hearings.

PURPOSE OF THE STUDY

- ❑ Project grade-by-grade enrollments from 2022-23 through 2026-27, a 5-year period
- ❑ Analyze community population trends, demographic characteristics and age structure, birth counts, and fertility rates
- ❑ Examine historical enrollments districtwide, by grade configuration (PK-5 and 6-8) and school, and by race/poverty status
- ❑ Compute student yields (children per housing unit) by housing type (e.g. 1- to 4-family, townhouse/condo, and apartment)
- ❑ Compare building capacities to current and projected enrollments
- ❑ Research new housing starts and the impact on school district
- ❑ Project enrollments based on students yields and housing turnover rates (completely independent analysis)

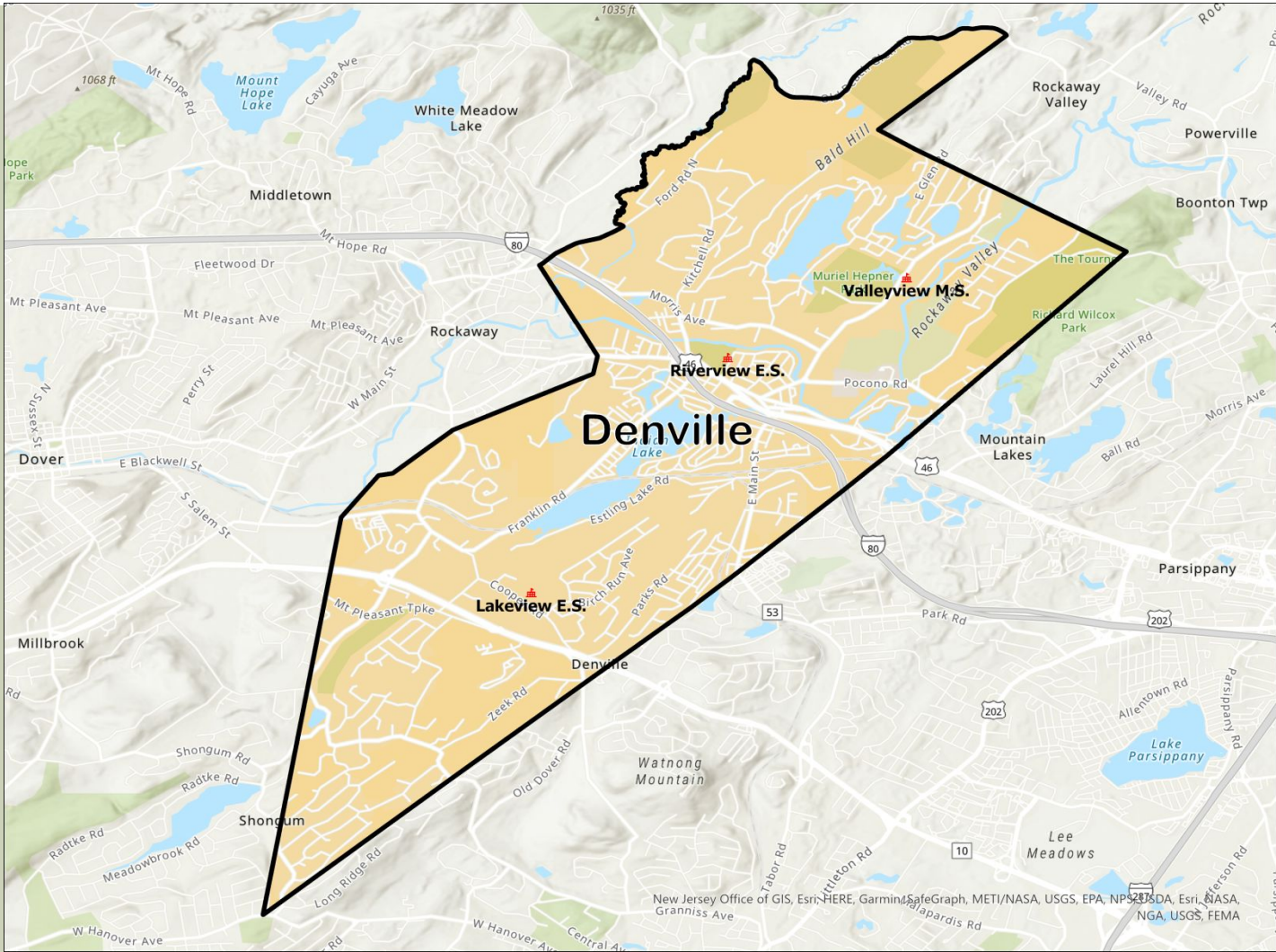
DENVILLE HISTORICAL AND PROJECTED POPULATIONS 1940-2040



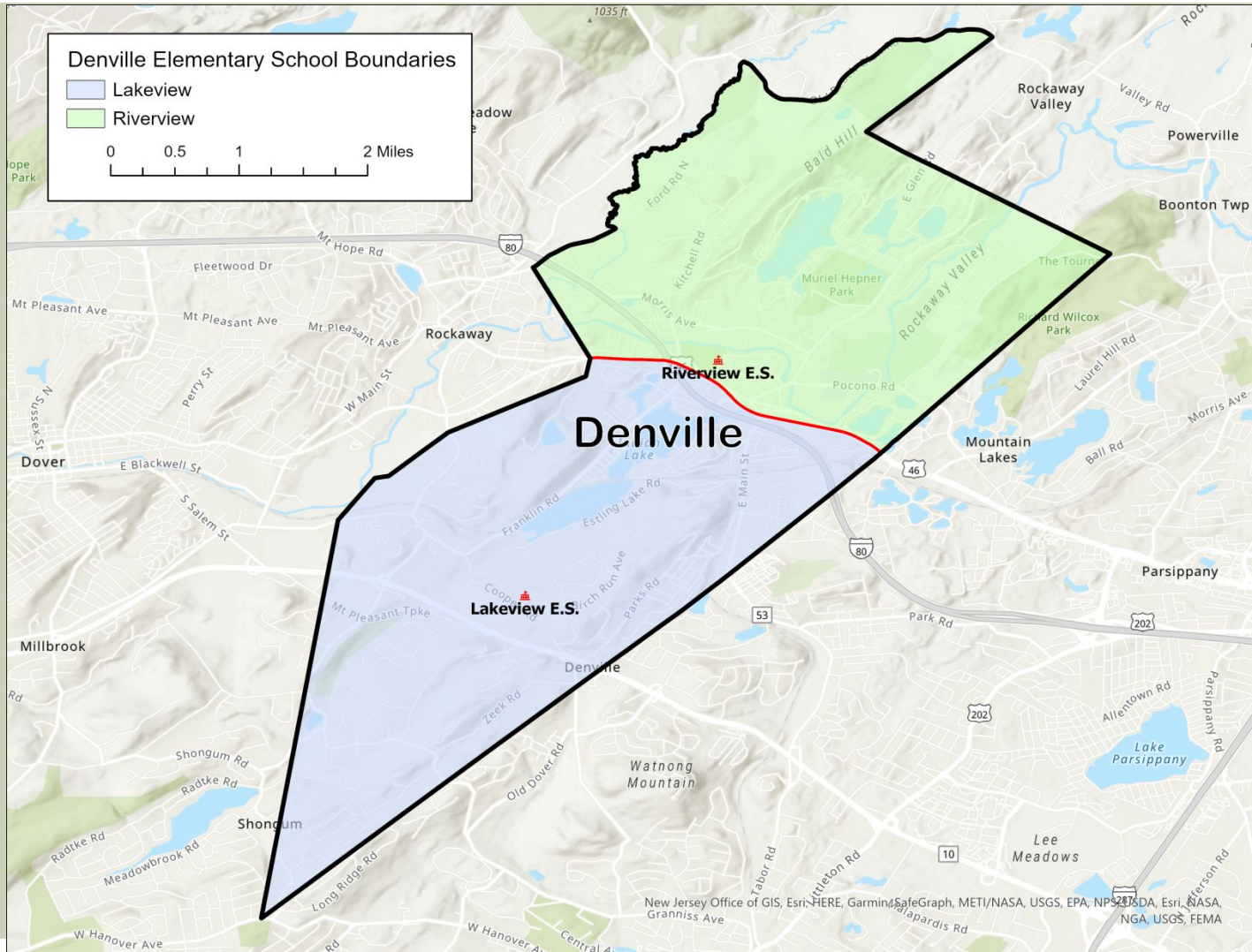
DENVILLE TOWNSHIP DEMOGRAPHIC PROFILE

- ❑ 78.8% White, 7.9% Asian, & 7.5% Hispanic in 2020 (increasing Asian and Hispanic populations and decreasing White population from 2010)
- ❑ Median age = 45.1 years (NJ = 40.2 years)
- ❑ 10.2% of population is foreign-born (NJ=23.4%). India and China are largest sources.
- ❑ Bachelor's Degree or Higher = 57.8% (NJ = 41.2%)
- ❑ Median household income = \$126K (NJ = \$86K)
- ❑ 6,800 housing units, of which 83% are 1-unit homes (attached or detached)
- ❑ 17% of housing units are renter-occupied (NJ = 36.7%).
- ❑ Median value of owner-occupied unit = \$420K

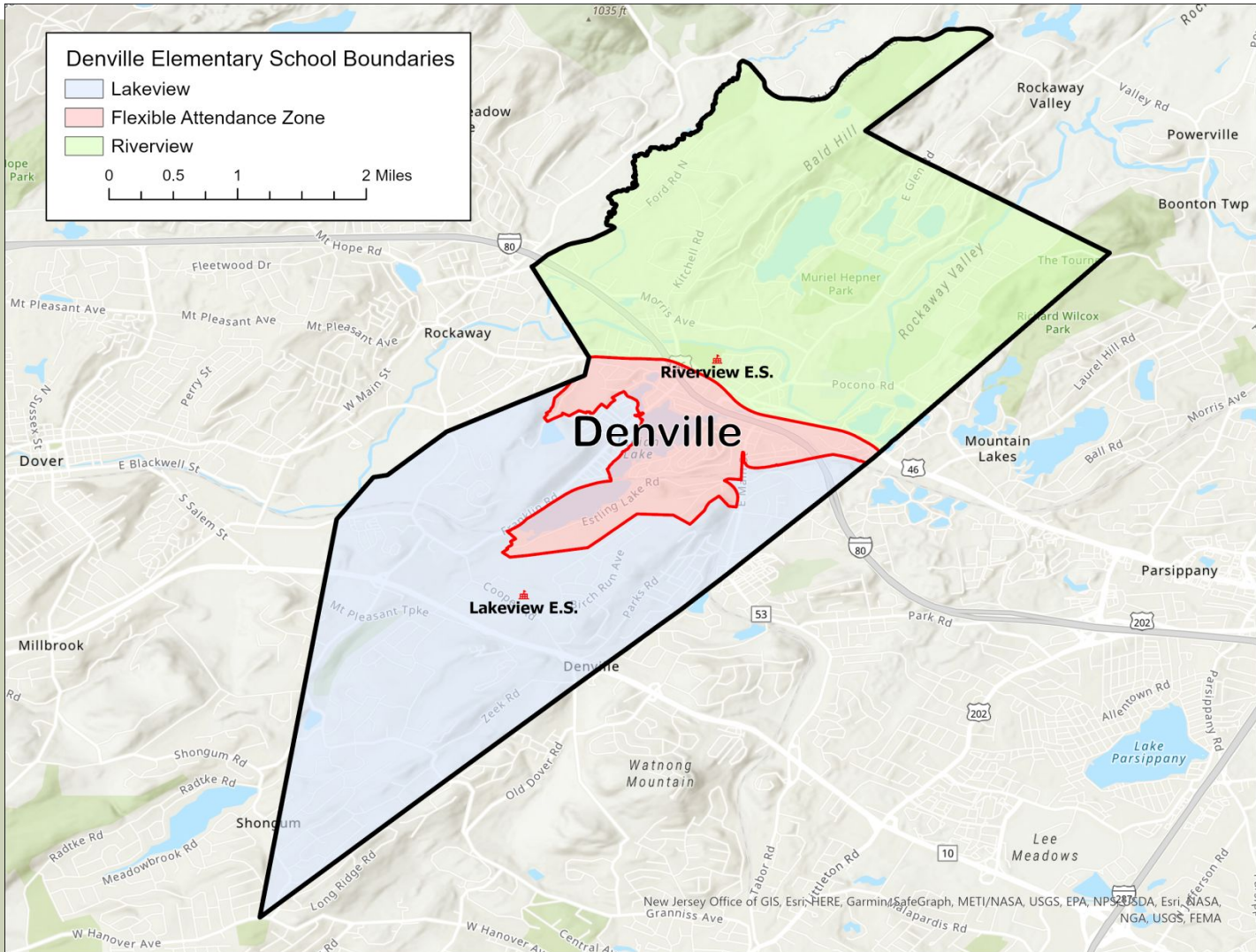
SCHOOL LOCATIONS



ELEMENTARY ATTENDANCE AREAS



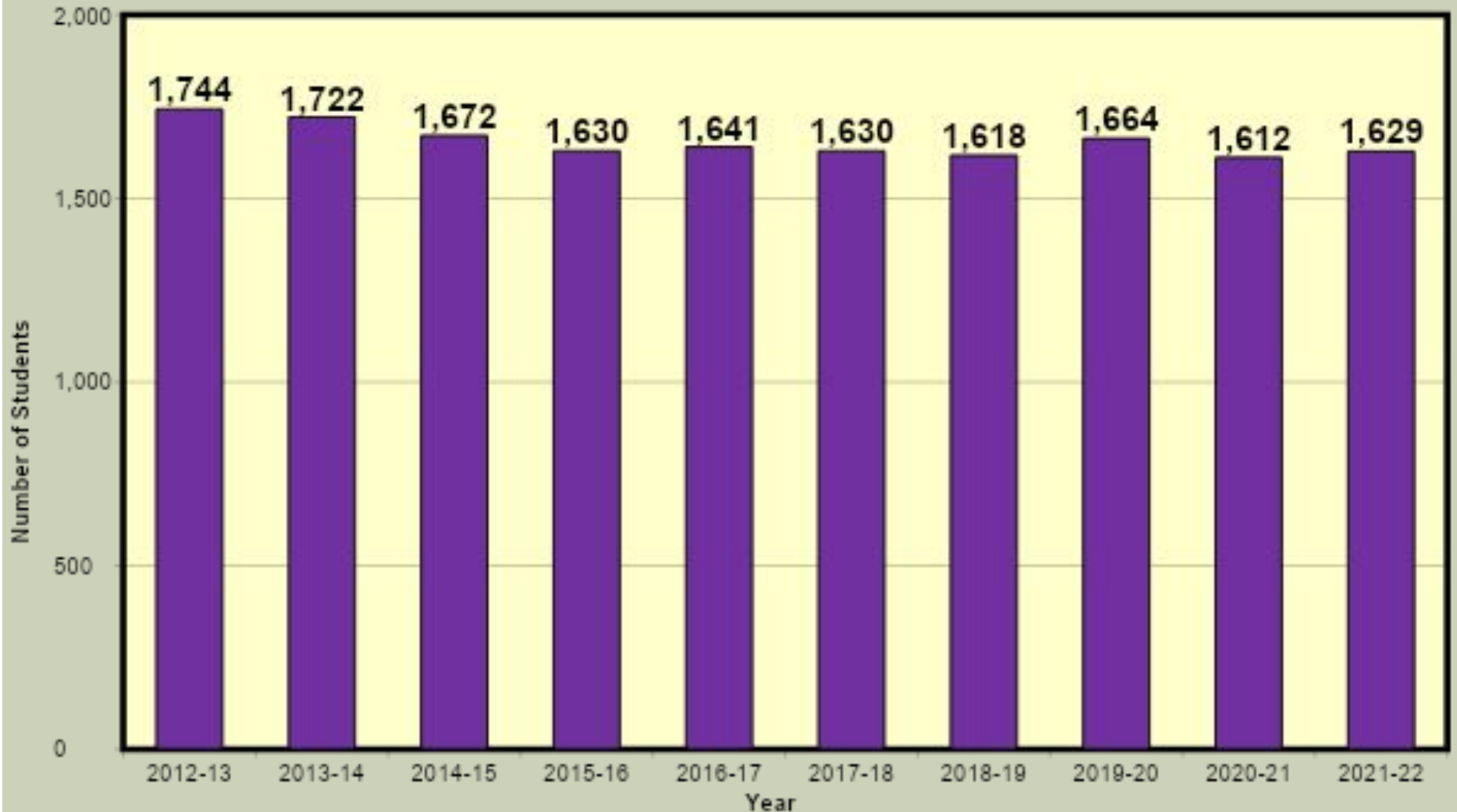
ELEMENTARY ATTENDANCE AREAS WITH FLEX ZONE



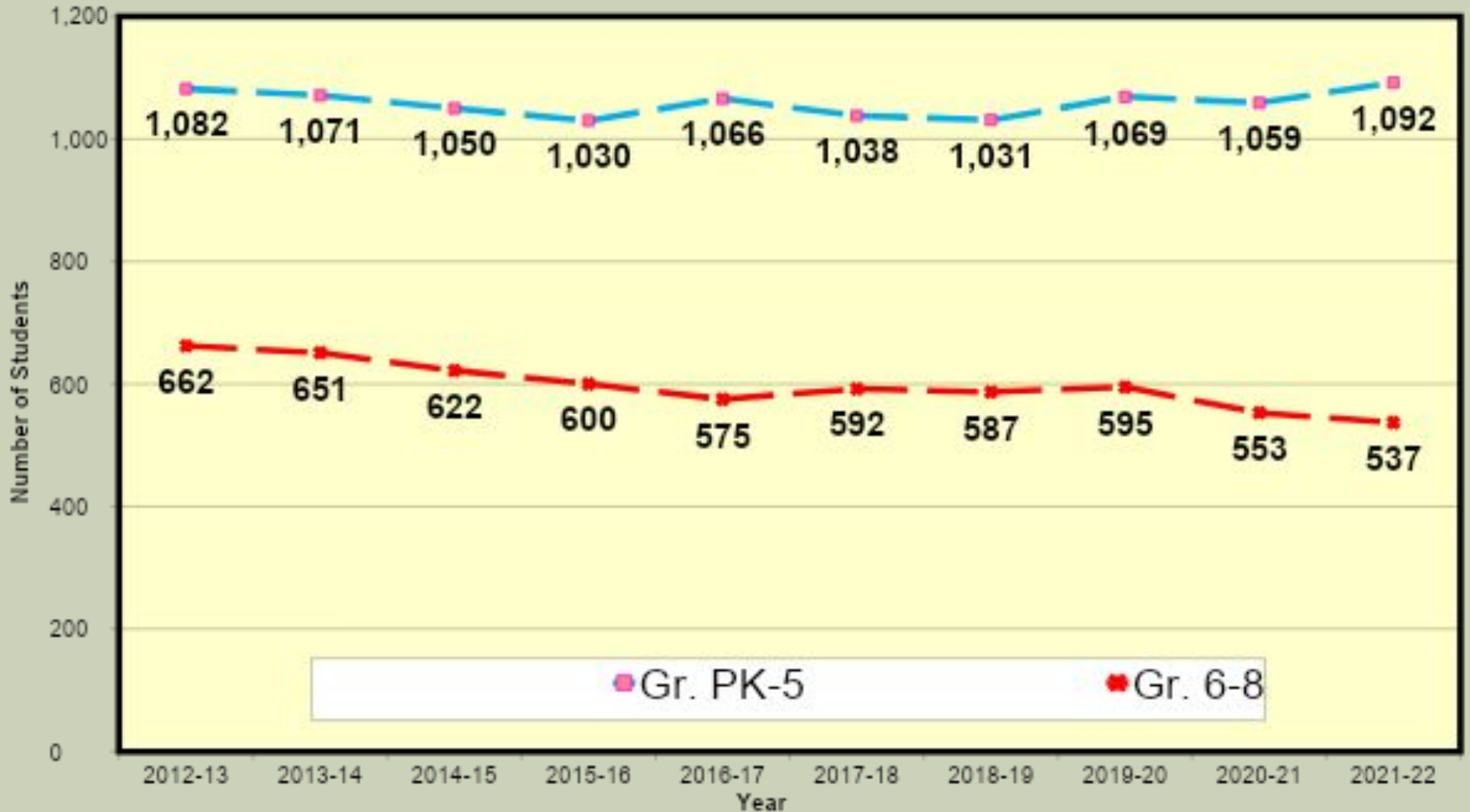
HISTORICAL ENROLLMENT TRENDS

- ❑ District's 2021-22 enrollment (10/15/21) is 1,629.
- ❑ Enrollments declined through 2015-16 before stabilizing.
- ❑ 2012-13 enrollment = 1,744 (loss of 115 students in 10 years)
- ❑ Cohort-Survival Ratio Method (CSR) was used to project enrollments five years into the future.

HISTORICAL ENROLLMENTS (PK-8) 2012-13 TO 2021-22



HISTORICAL ENROLLMENTS BY GRADE CONFIGURATION 2012-13 TO 2021-22



ENROLLMENT PROJECTION METHOD

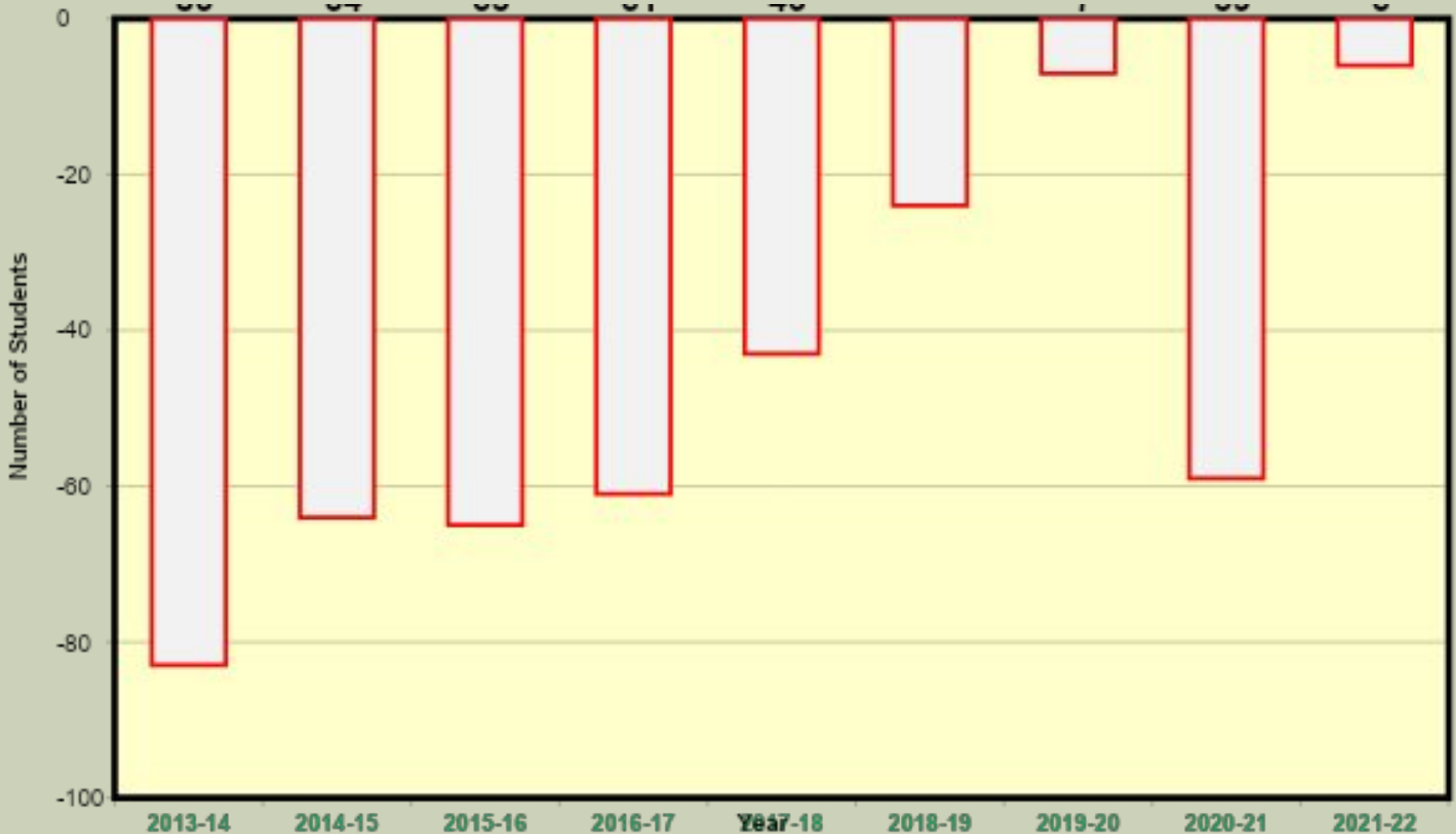
COHORT SURVIVAL RATIO

- ❑ Ratios are calculated for each grade progression. (Ex. 100 1st graders in 2020-21 become 95 2nd graders in 2021-22 = 0.95)
- ❑ Ratios above 1.000 = inward migration, below 1.000 = outward migration
- ❑ Survival ratios were computed for ten historical years. All 9 average ratios (5-year) were above 1.000.
- ❑ Average ratios were applied to current enrollments to project future enrollments.

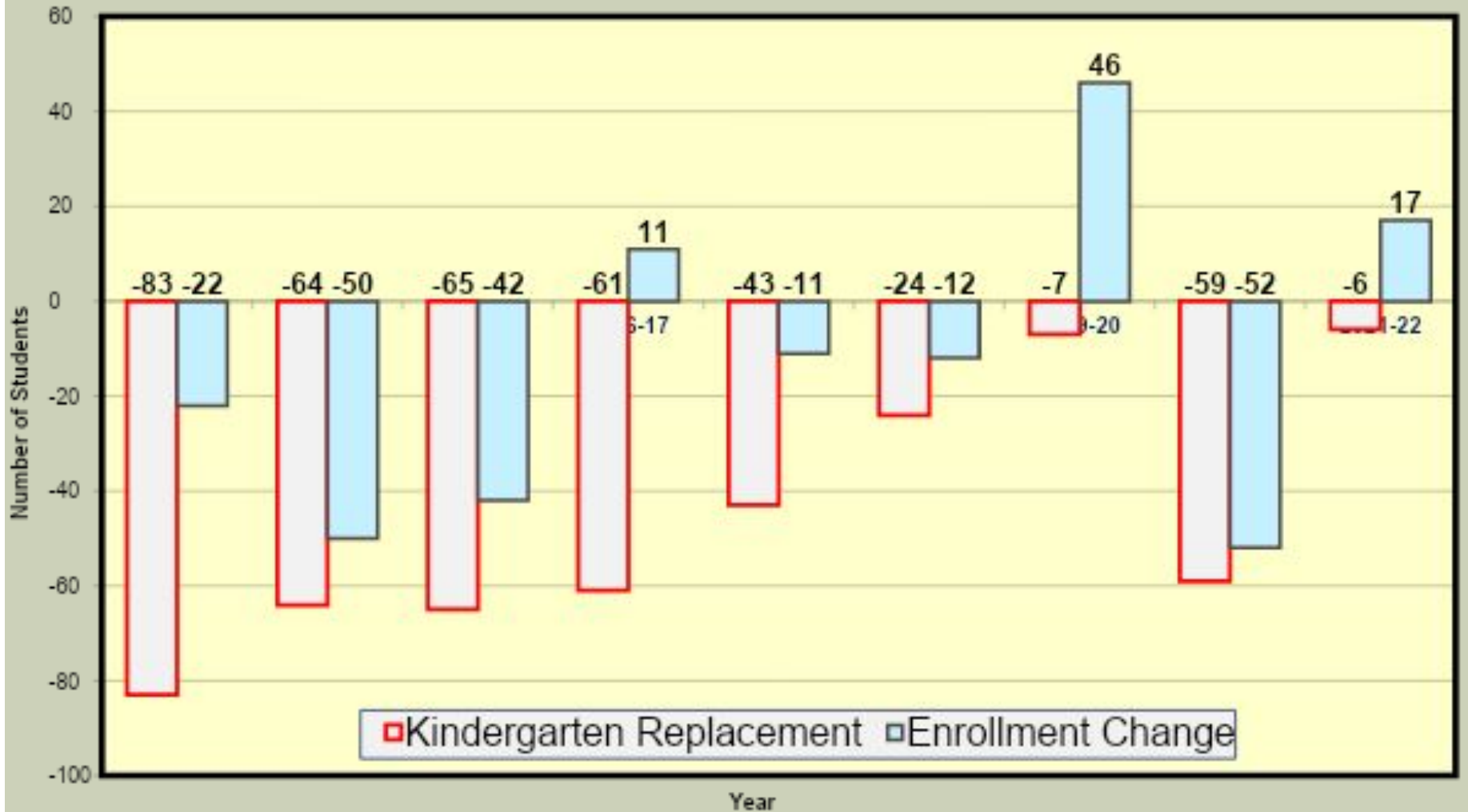
KINDERGARTEN REPLACEMENT

- ❑ Negative kindergarten replacement (KR) has occurred in each of last 9 years, ranging from 6-83 students per year.
- ❑ Negative KR- Number of entering kindergarten students is less than number of graduating 8th grade students from prior year.
- ❑ Magnitude of KR declining over time due to larger entering kindergarten classes and smaller graduating 8th grade classes.

HISTORICAL KINDERGARTEN REPLACEMENT



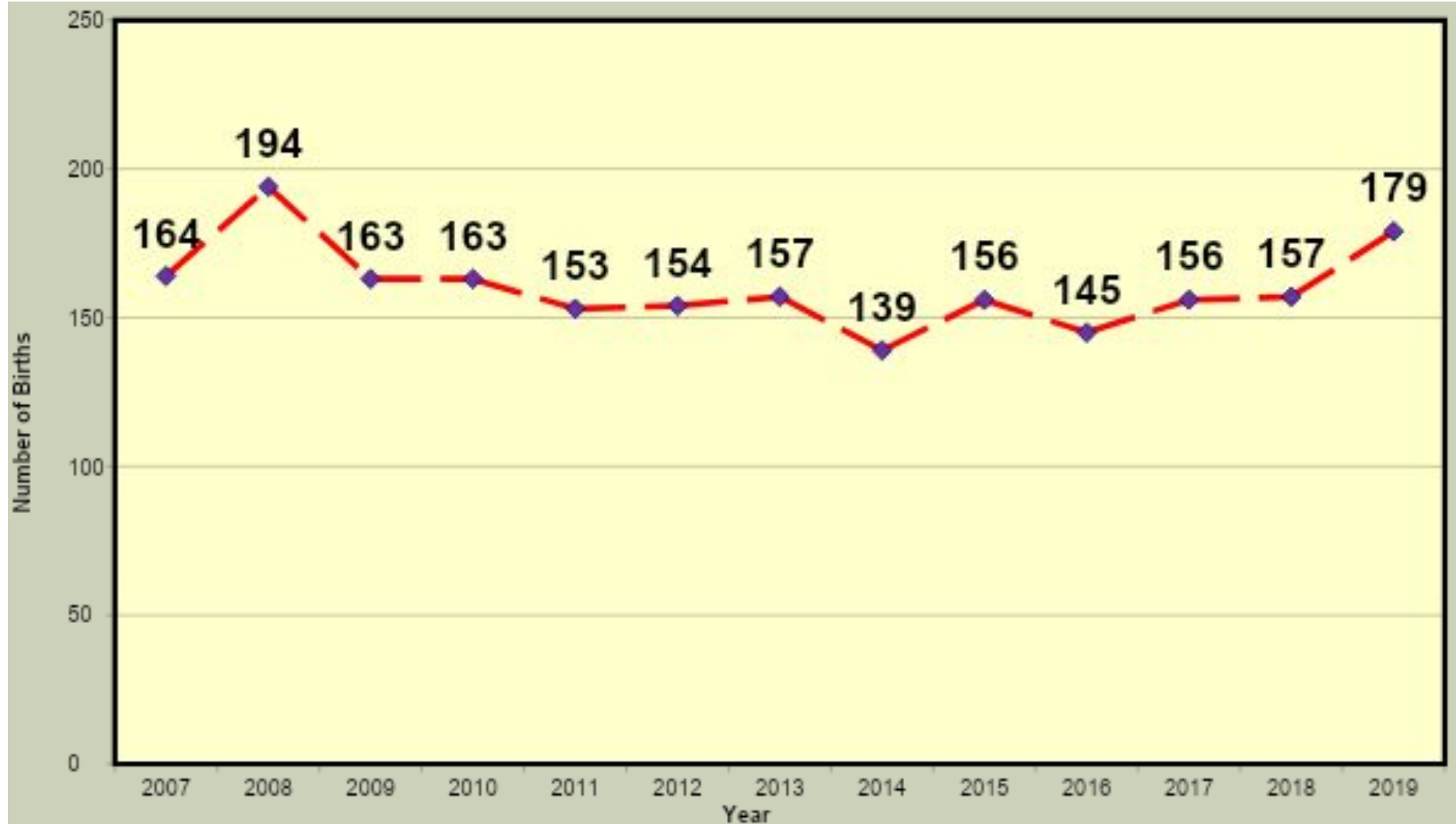
TOTAL ENROLLMENT CHANGE VS. KINDERGARTEN REPLACEMENT



DENVILLE TOWNSHIP BIRTH COUNTS

- ❑ Births are used to project kindergarten students 5 years later.
- ❑ Analyzed birth data from 2007-2019. After a period of decline, births have reversed trend and have increased in last 5 years.

DENVILLE HISTORICAL BIRTH COUNTS 2007-2019



BIRTH COUNTS AND BIRTH-TO-KINDERGARTEN SURVIVAL RATIOS

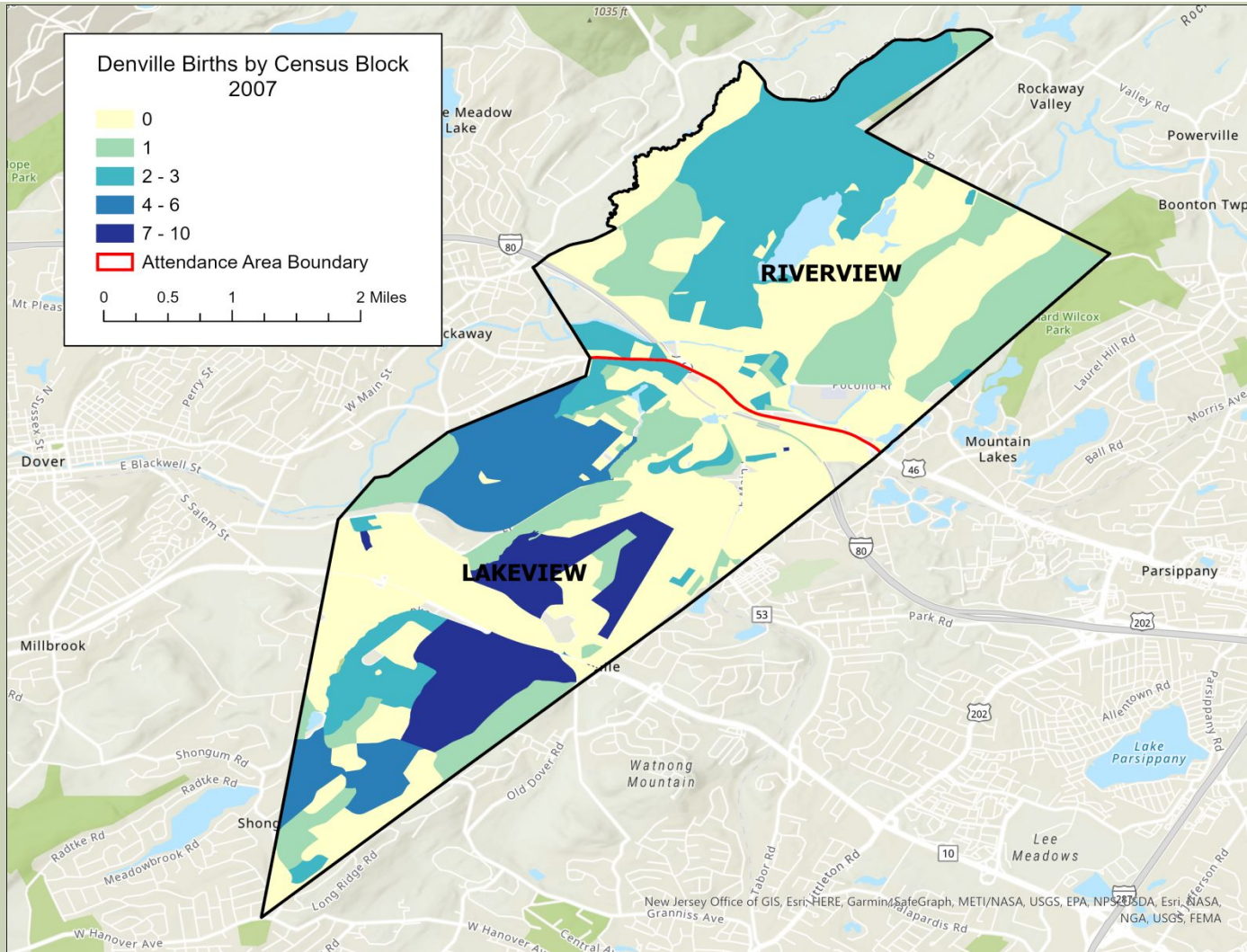
Birth Year	Number of Births Denville Township	Kindergarten Students 5 Years Later	Birth-to-Kindergarten Survival Ratio
2007	164	118	0.720
2008	194	147	0.758
2009	163	156	0.957
2010	163	137	0.840
2011	153	156	1.020
2012	154	159	1.032
2013	157	165	1.051
2014	139	179	1.288
2015	156	168	1.077
2016	145	170	1.172
2017	156	N/A	N/A
2018	157	N/A	N/A
2019	179	N/A	N/A

Full-Day
K

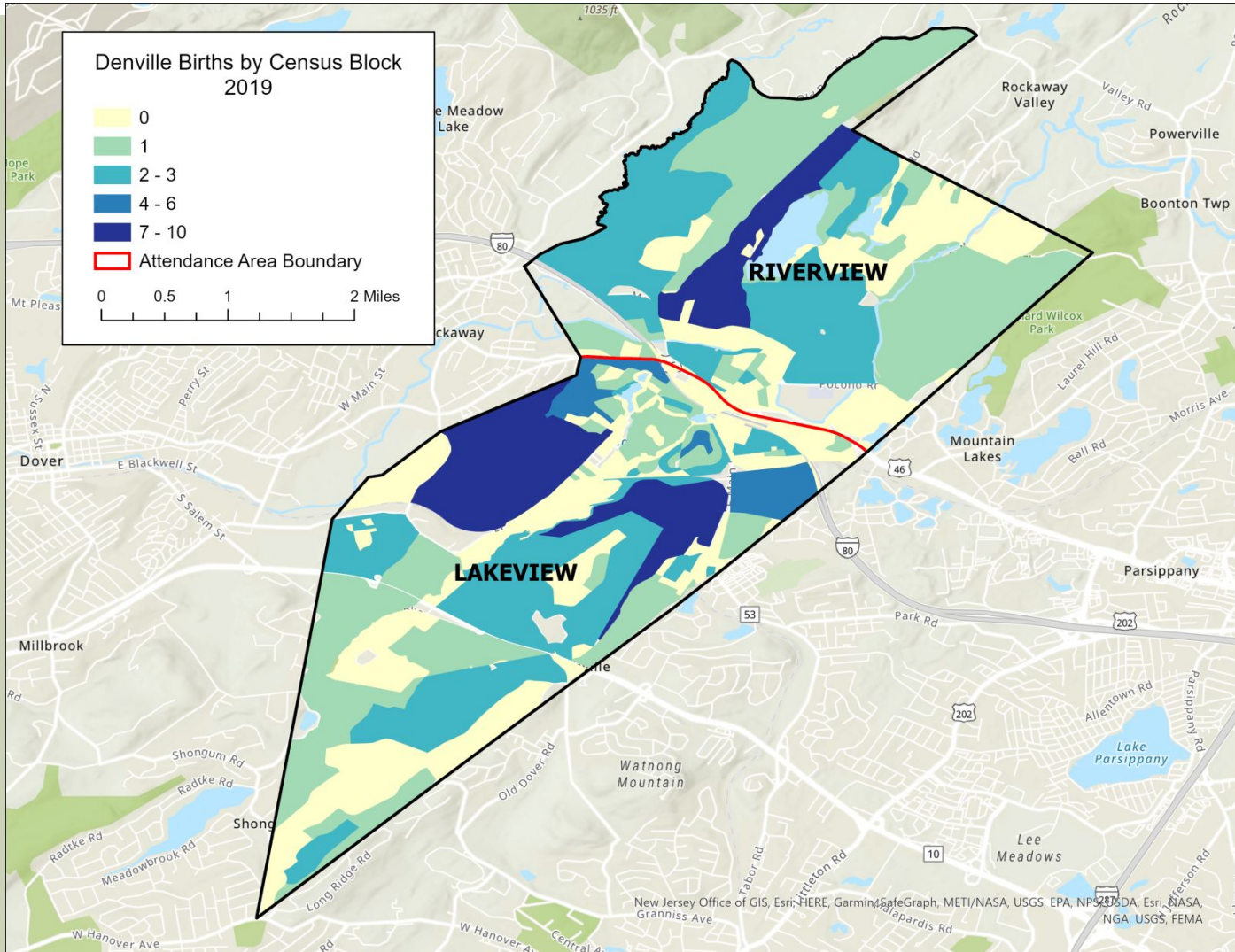
BIRTHS BY ATTENDANCE AREA 2007-2019

Birth Year	Lakeview	Riverview	Unknown
2007	119	40	5
2008	123	57	14
2009	94	50	19
2010	95	51	17
2011	102	45	6
2012	97	49	8
2013	105	51	1
2014	81	53	5
2015	107	48	1
2016	92	51	2
2017	93	56	7
2018	101	53	3
2019	121	56	2
Total 2007-2019	1,330	660	

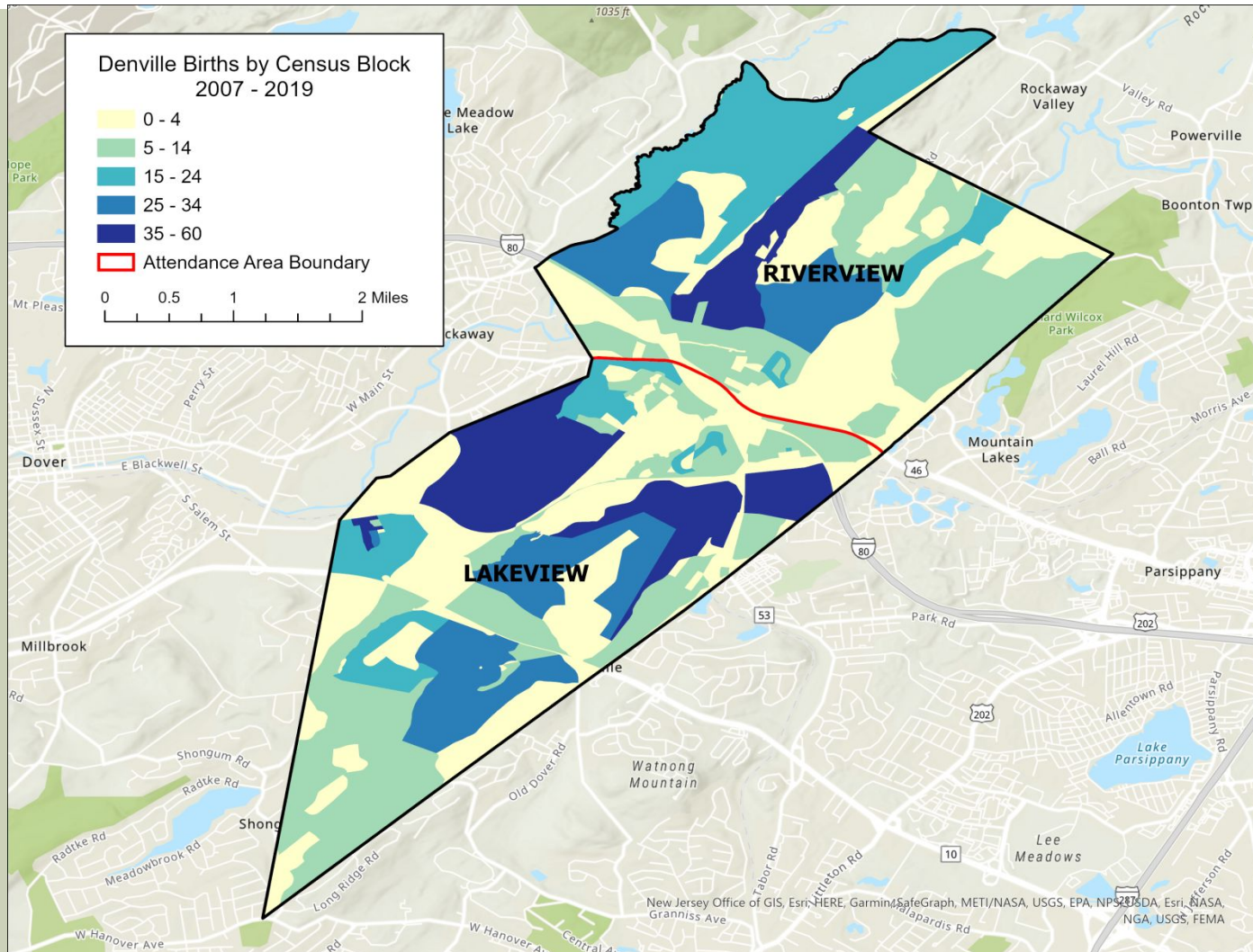
BIRTHS BY CENSUS BLOCK 2007



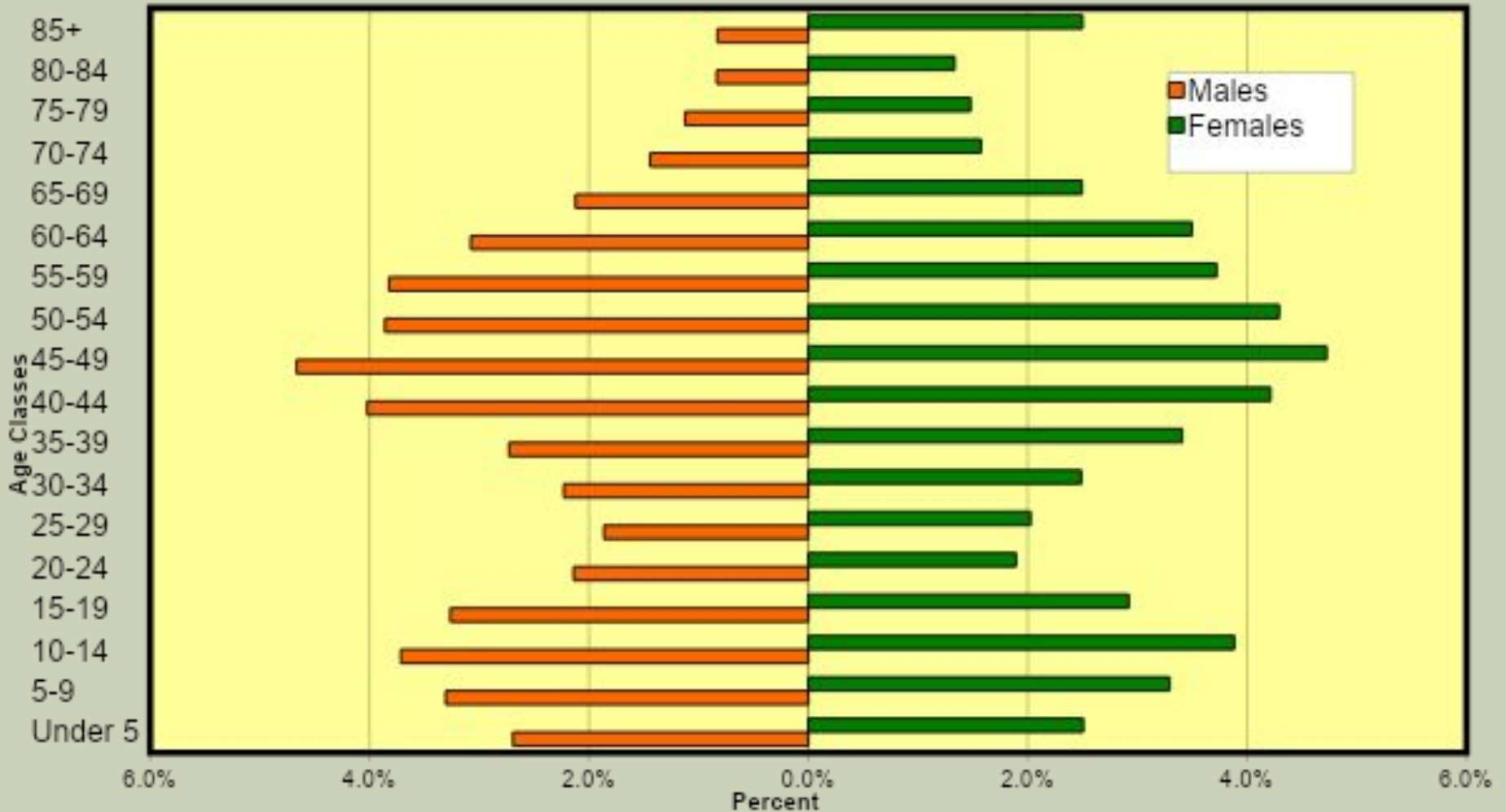
BIRTHS BY CENSUS BLOCK 2019



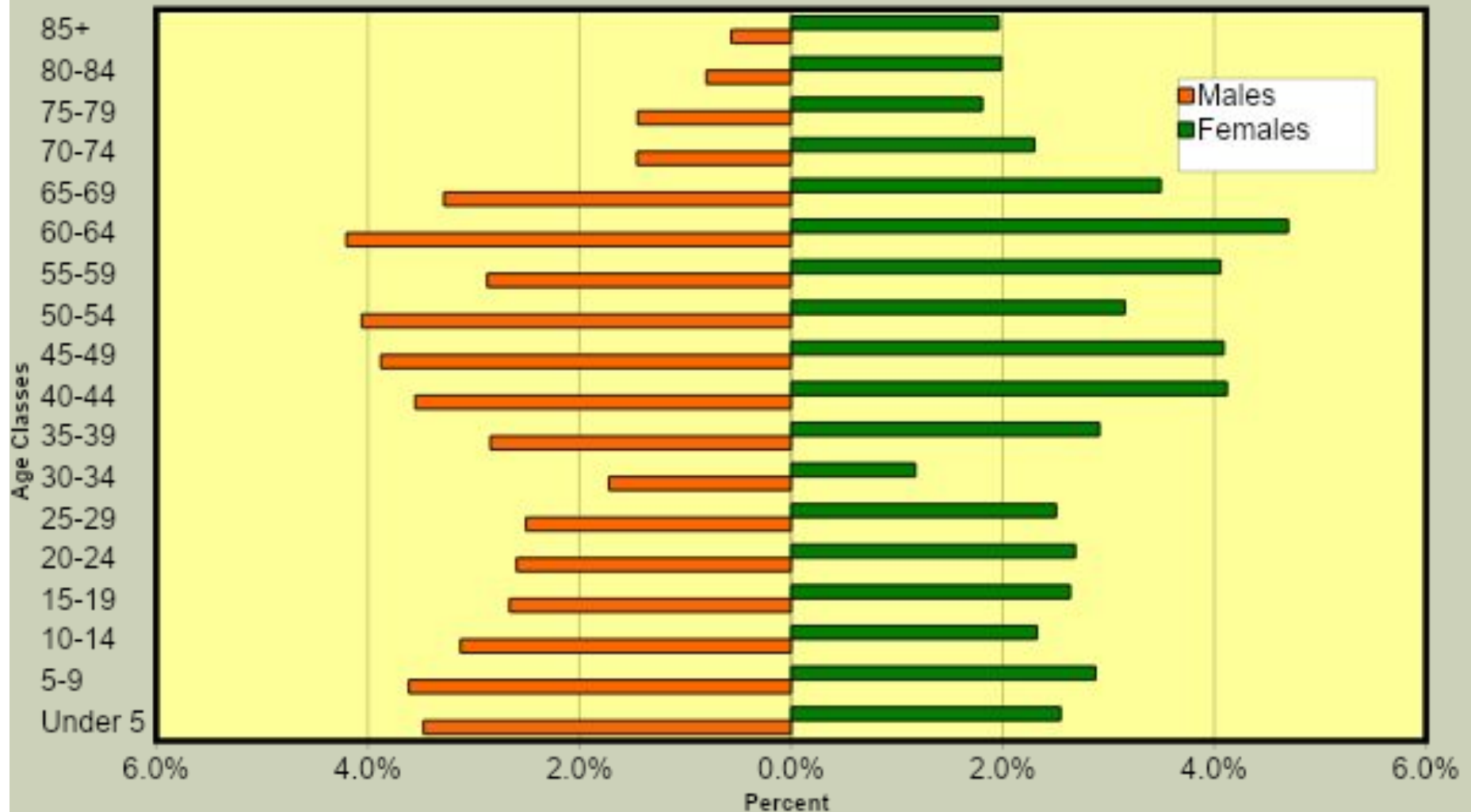
BIRTHS BY CENSUS BLOCK 2007-2019



AGE PYRAMID DENVILLE TOWNSHIP 2010 CENSUS



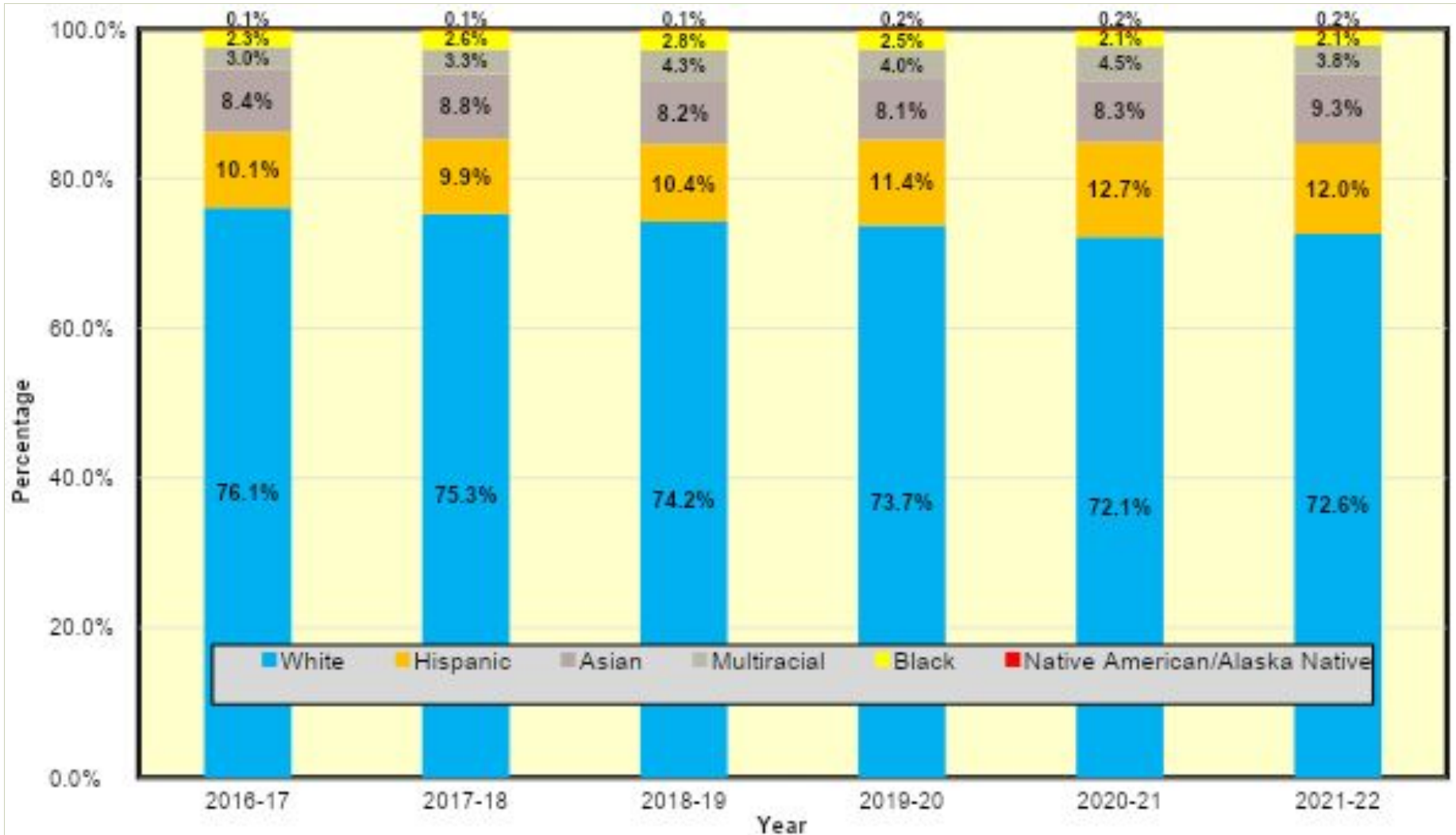
AGE PYRAMID DENVER TOWNSHIP 2015-2019 ACS



CHANGE IN MALES AND FEMALES 2010 TO 2015-2019 DENVER TOWNSHIP

Age Group	Males		Females	
	Numerical Change	Percentage Point Change	Numerical Change	Percentage Point Change
Under 5	+129	+0.8	+6	0.0
5-9	+50	+0.3	-70	-0.4
10-14	-99	-0.6	-260	-1.6
15-19	-101	-0.6	-48	-0.3
20-24	+75	+0.5	+131	+0.8
25-29	+106	+0.6	+79	+0.5
30-34	-85	-0.5	-219	-1.3
35-39	+18	+0.1	-83	-0.5
40-44	-79	-0.5	-17	-0.1
45-49	-132	-0.8	-107	-0.6
50-54	+32	+0.2	-190	-1.1
55-59	-159	-1.0	+55	+0.3
60-64	+186	+1.1	+198	+1.2
65-69	+192	+1.2	+165	+1.0
70-74	+2	0.0	+120	+0.7
75-79	+54	+0.3	+54	+0.3
80-84	-6	0.0	+108	+0.7
85+	-44	-0.3	-90	-0.5

ENROLLMENTS BY RACE 2016-17 TO 2021-22



ENROLLMENTS BY RACE

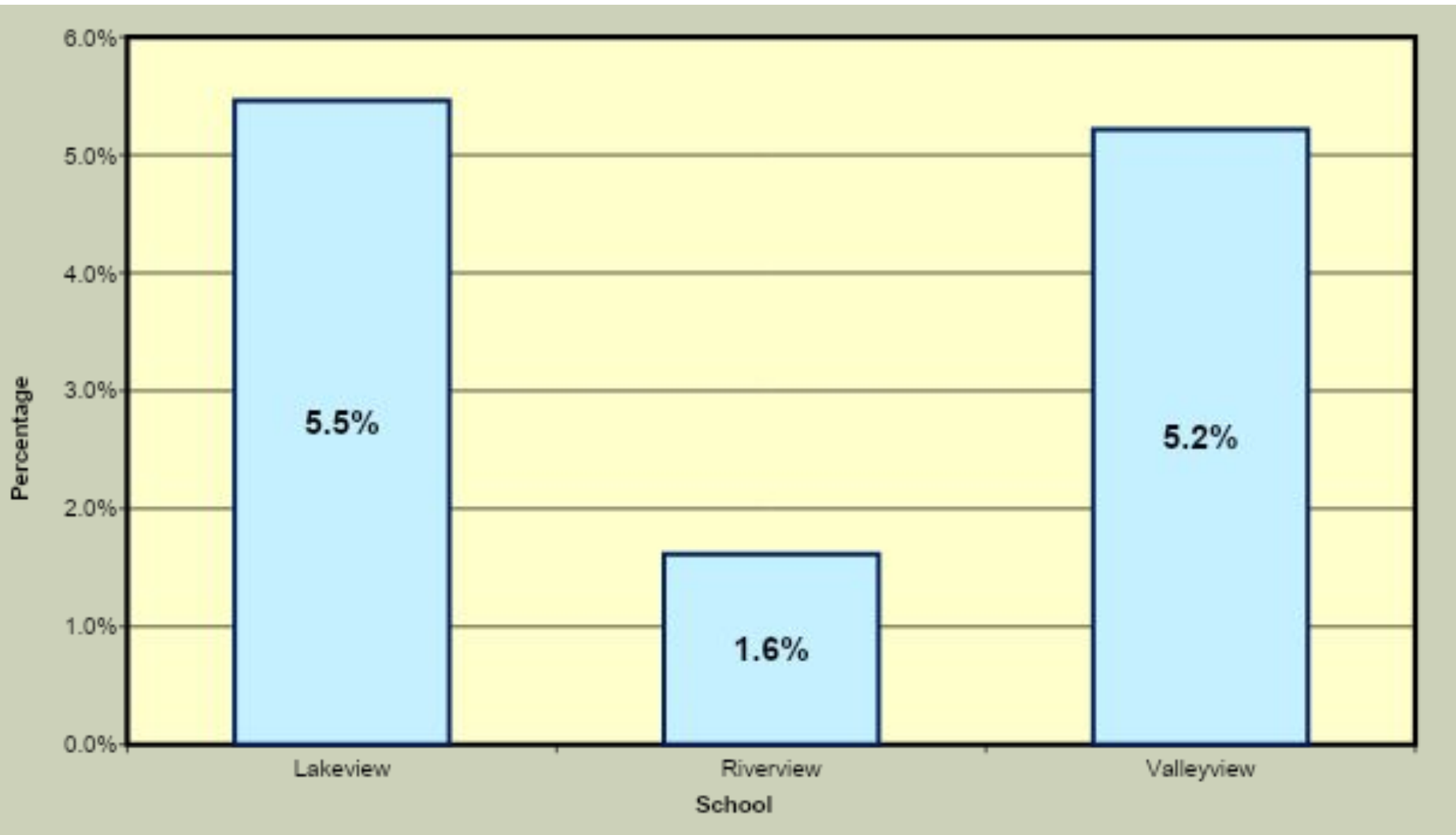
2021-22

School	White	Black	Hispanic	Asian	Alaska Native/ Native American	Multiracial	Total
Lakeview E.S. (PK-5)	451	18	77	82	2	29	659
	68.4%	2.7%	11.7%	12.4%	0.3%	4.4%	100.0%
Riverview E.S. (K-5)	347	5	46	20	0	15	433
	80.1%	1.2%	10.6%	4.6%	0.0%	3.5%	100.0%
Valleyview M.S. (6-8)	385	11	73	49	1	18	537
	71.7%	2.0%	13.6%	9.1%	0.2%	3.4%	100.0%
Total	1,183	34	196	151	3	62	1,629
	72.6%	2.1%	12.0%	9.3%	0.2%	3.8%	100.0%

ECONOMICALLY DISADVANTAGED STUDENTS

- 68 students (4.1%) were economically disadvantaged in the school district in 2016-17.
- 71 students (4.4%) in 2021-22, which is not significantly different.
- Lakeview has consistently had a greater number of economically disadvantaged students than Riverview in last 6 years.

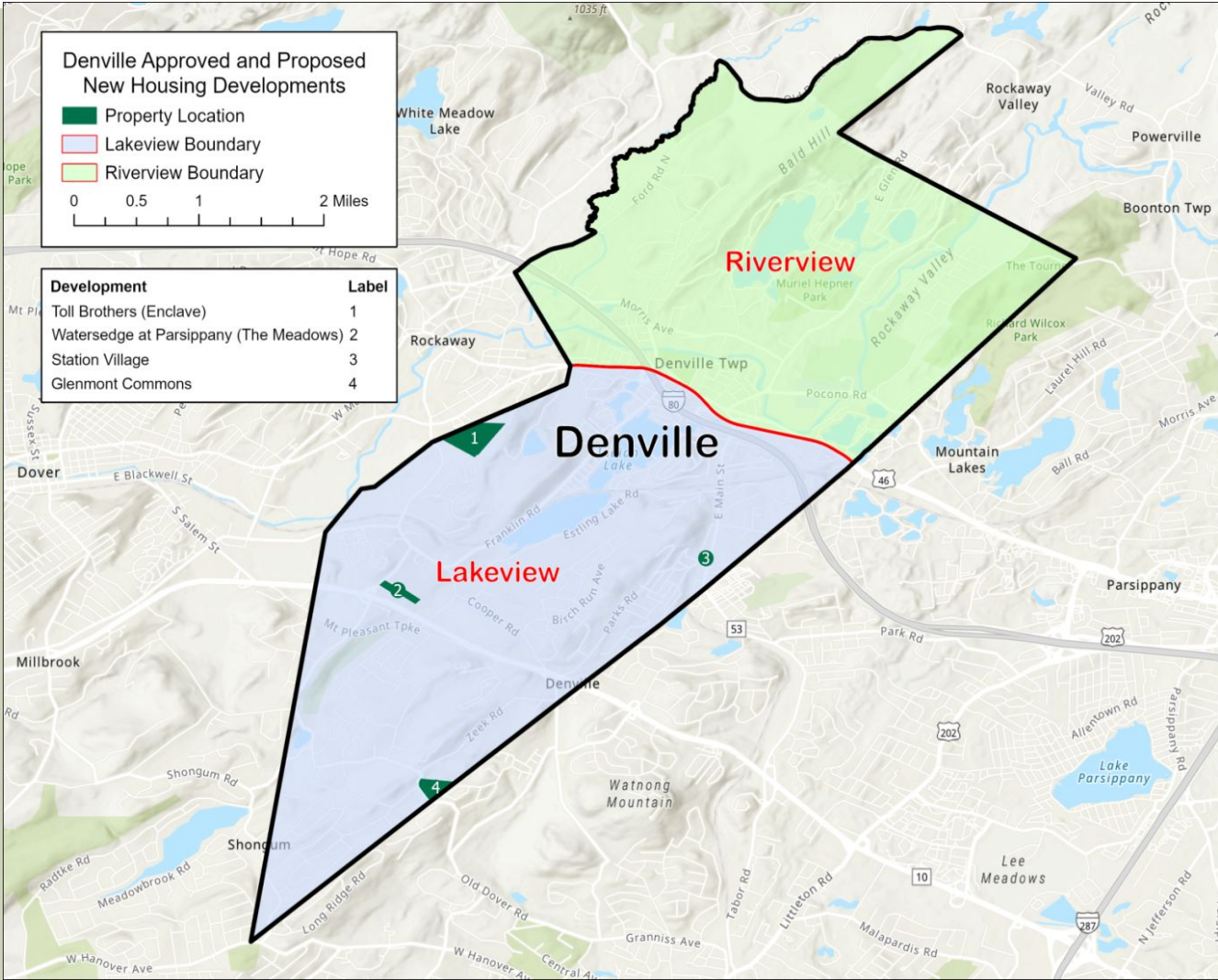
ECONOMICALLY DISADVANTAGED STUDENTS 2021-22



PROPOSED NEW HOUSING DENVER TOWNSHIP

Subdivision/ Developer	Elementary Attendance Area	Number of Units	Bedroom Distribution	Housing Type	Notes
Glenmont Commons (Casterline Road)	Lakeview	65	Market-Rate Duplex (10) 2-BR Affordable Duplex (10) Market-Rate TH (45) 2-3 BR	Duplex (Market-Rate and Affordable) Townhouse (Market-Rate)	Exact bedroom distribution is unavailable. Units will be constructed in nine buildings. Has been approved (December 2018) but has not begun construction. 10 duplex units will be set aside for Low-Moderate Income households.
Enclave at Denville (360 Franklin Avenue)	Lakeview	116	Market-Rate TH (92) 92 3-BR Affordable TH (24) 5 1-BR 14 2-BR 5 3-BR	Townhouse (Market-Rate and Affordable)	Has been approved (March 2019) but has not begun construction. 24 units will be set aside for Low-Moderate Income households.
The Meadows (382 and 384 Franklin Road)	Lakeview	60	Market-Rate TH (48) 2-3 BR Affordable TH (12)	Townhouse (Market-Rate and Affordable)	Exact bedroom distribution is unavailable. Has not been approved. Units will be constructed in nine buildings. 12 units will be set aside for Low-Moderate Income households.
Station Village (Route 53 and Station Road)	Lakeview	58	Market-Rate Apts. (49) Affordable Apts. (9) 28 1-BR 28 2-BR 2 3-BR	Apartment (Market-Rate and Affordable)	Has not been approved. Three-story building to be constructed. Nine (9) units will be set aside for Low-Moderate Income households.
Total		299			

PROPOSED NEW HOUSING DENVILLE TOWNSHIP



STUDENT YIELDS

- Student yields (K-8) were computed by housing type to determine impact of new developments.
- Student addresses were joined to the Denville Township property database.
- 1-4 Family homes (mostly detached SF or duplex): 0.47
- Townhouse/Condo: 0.22
- Apartments: 0.09
- 75 public school children (K-8) are projected from new housing – **Rough estimate** as bedroom distributions were not available for some of the developments.
- Enrollment projections were modified to account for additional children from new developments.

STUDENT YIELDS

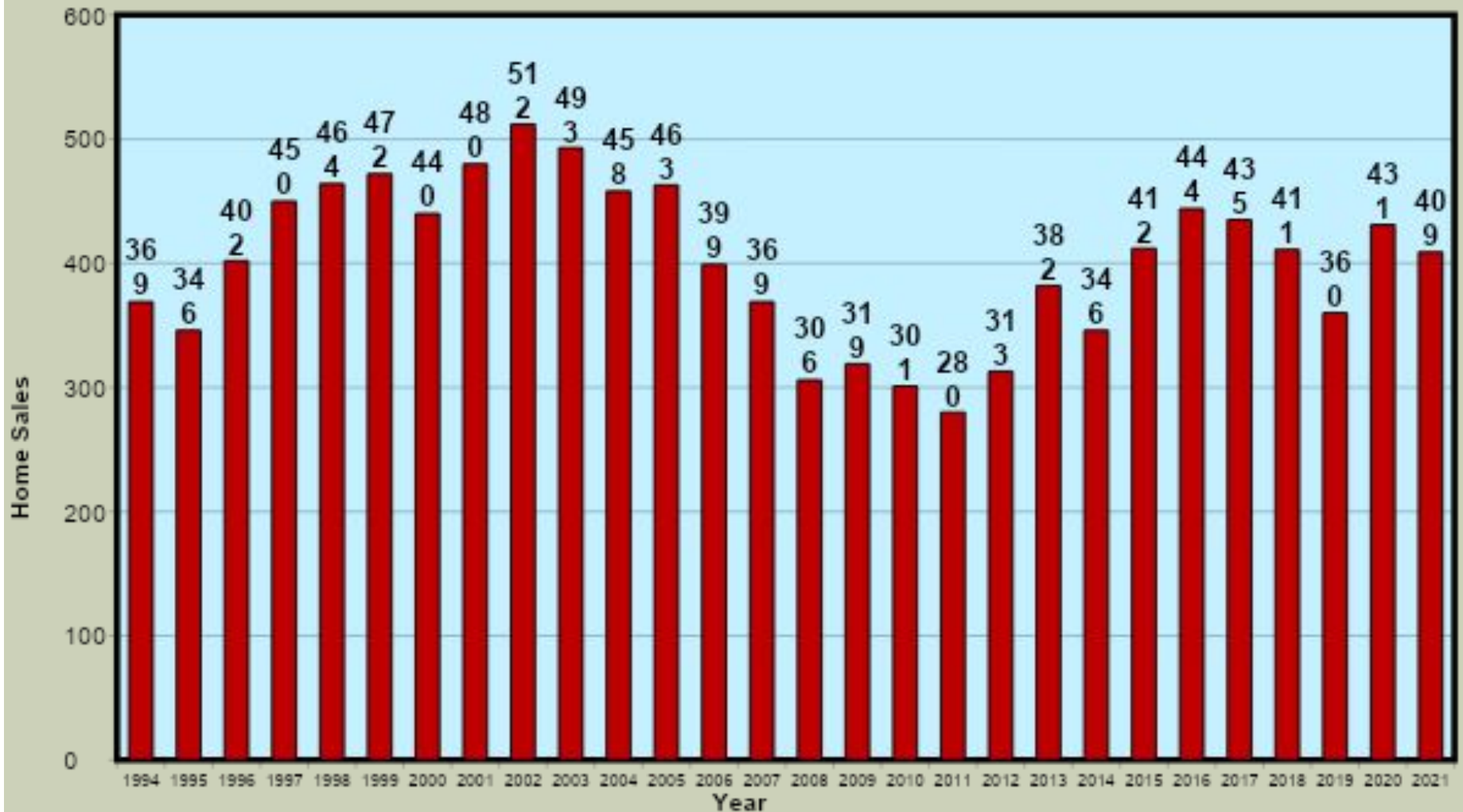
TOWNHOUSES/CONDOS

Development	Price (\$) +/-	Year Built	Bedrooms	Number of Units	K-5 Students	6-8 Students	K-8 Students	2021-22 Student Yield
Berkshire Hills	\$375,000	1995-1998	2-3 BR	420	34	22	56	0.133
Forges (The)	\$325,000 mid-rise; \$525,000 TH	2004-2005	2-4 BR	183	62	35	97	0.530
Landmark Belltower	\$235,000	1986-1987	1-2 BR	15	0	0	0	0.000
Orchard Street	\$437,000	2015	2-BR	5	2	1	3	0.600
Schoolhouse Plaza	\$195,000	1985	0-2 BR	30	0	0	0	0.000
Seneca Estates	\$350,000	1995	2 BR	14	0	0	0	0.000
Valley Stream	\$200,000	1986	1-2 BR	47	0	0	0	0.000
53-57 Old Boonton Road	\$129,000	2012	2-BR	3	1	0	1	0.333
Total				717	99	58	157	0.219

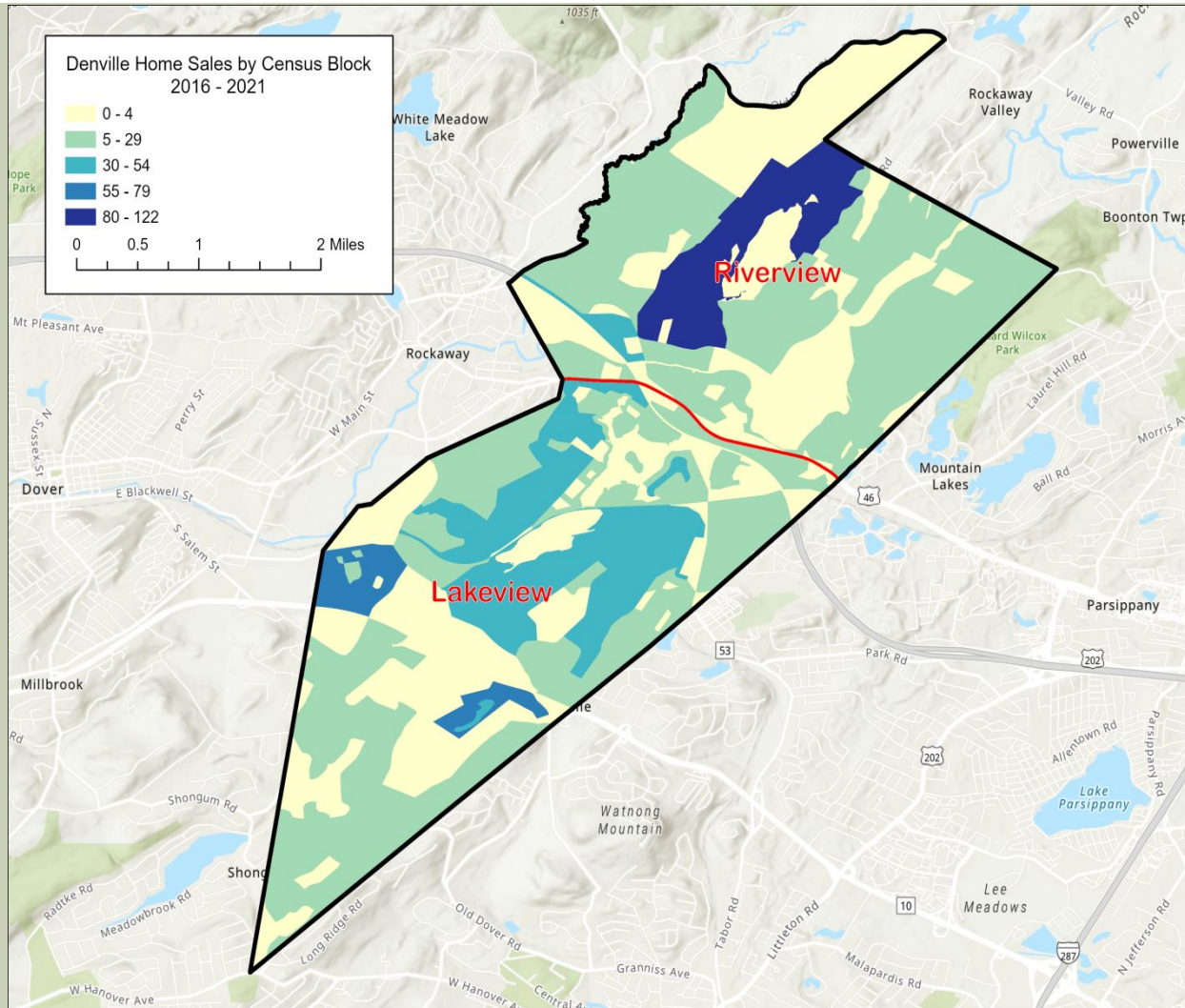
STUDENT YIELDS APARTMENTS

Development (Property Address)	Rent (\$)	Year Built	Bedrooms	Number of Units	K-5 Students	6-8 Students	K-8 Students	2021-22 Student Yield
Denville Manor (60 Manor Road)	\$1,475-\$1,875	1960	1-2 BR	50	2	2	4	0.080
Estling Village (30 Estling Lake Road)	\$3,000-\$3,200	2015	1-2 BR	100	11	4	15	0.150
Pinefield Manor (20 Memorial Court)	\$1,575-\$1,650	1965	1-2 BR	98	1	2	3	0.031
60-62 Indian Road	N/A	1975	N/A	6	1	0	1	0.167
Total				254	15	8	23	0.091

HOME SALES DENVER TOWNSHIP 1994-2021



HOME SALES DENVILLE TOWNSHIP 2016-2021



ENROLLMENT PROJECTIONS

Year	PK	K	1	2	3	4	5	6	7	8	SE	Total
Baseline												
2022-23	34	182	175	179	189	189	182	169	165	189	1	1,654
2023-24	34	182	188	181	182	195	190	188	169	165	1	1,675
2024-25	34	206	188	194	184	187	196	196	188	169	1	1,743
2025-26	34	186	212	194	197	189	188	203	196	188	1	1,788
2026-27	34	190	192	219	197	203	190	194	203	196	1	1,819
Adjusted for Housing Growth												
2022-23	34	185	177	182	191	192	185	172	168	192	1	1,679
2023-24	34	186	195	187	189	202	197	195	177	172	1	1,735
2024-25	34	208	193	202	192	195	204	206	196	179	1	1,810
2025-26	34	190	214	199	205	197	196	211	206	196	1	1,849
2026-27	34	194	196	221	202	211	198	203	211	206	1	1,877

ENROLLMENT PROJECTIONS BY GRADE CONFIGURATION

Historical	PK-5		6-8	
2021-22	1,092		537	
Projected	PK-5 Baseline	PK-5 Adjusted	6-8 Baseline	6-8 Adjusted
2022-23	1,130	1,146	524	533
2023-24	1,152	1,190	523	545
2024-25	1,189	1,228	554	582
2025-26	1,200	1,235	588	614
2026-27	1,225	1,256	594	621
5-year Change	+133	+164	+57	+84

CAPACITY ANALYSIS

School	Capacity	Current Enrollment 2021-22	Difference	Projected Enrollment 2026-27	Difference
Lakeview E.S. (PK-5)	635	659	-24	751	-116
Riverview E.S. (K-5)	321 (without Riverview Annex)	433	-112	505	-184
	443 (with Riverview Annex)		+10		-62
Valleyview M.S. (6-8)	544	537	+7	621	-77

HOUSING TURNOVER ANALYSIS

Completely independent analysis using houses, not students, to project enrollment. Only done for 1-4 Family homes homes, TH/condos, age-restricted units removed.

Should not be used for yearly enrollment projections. Use those from CSR.

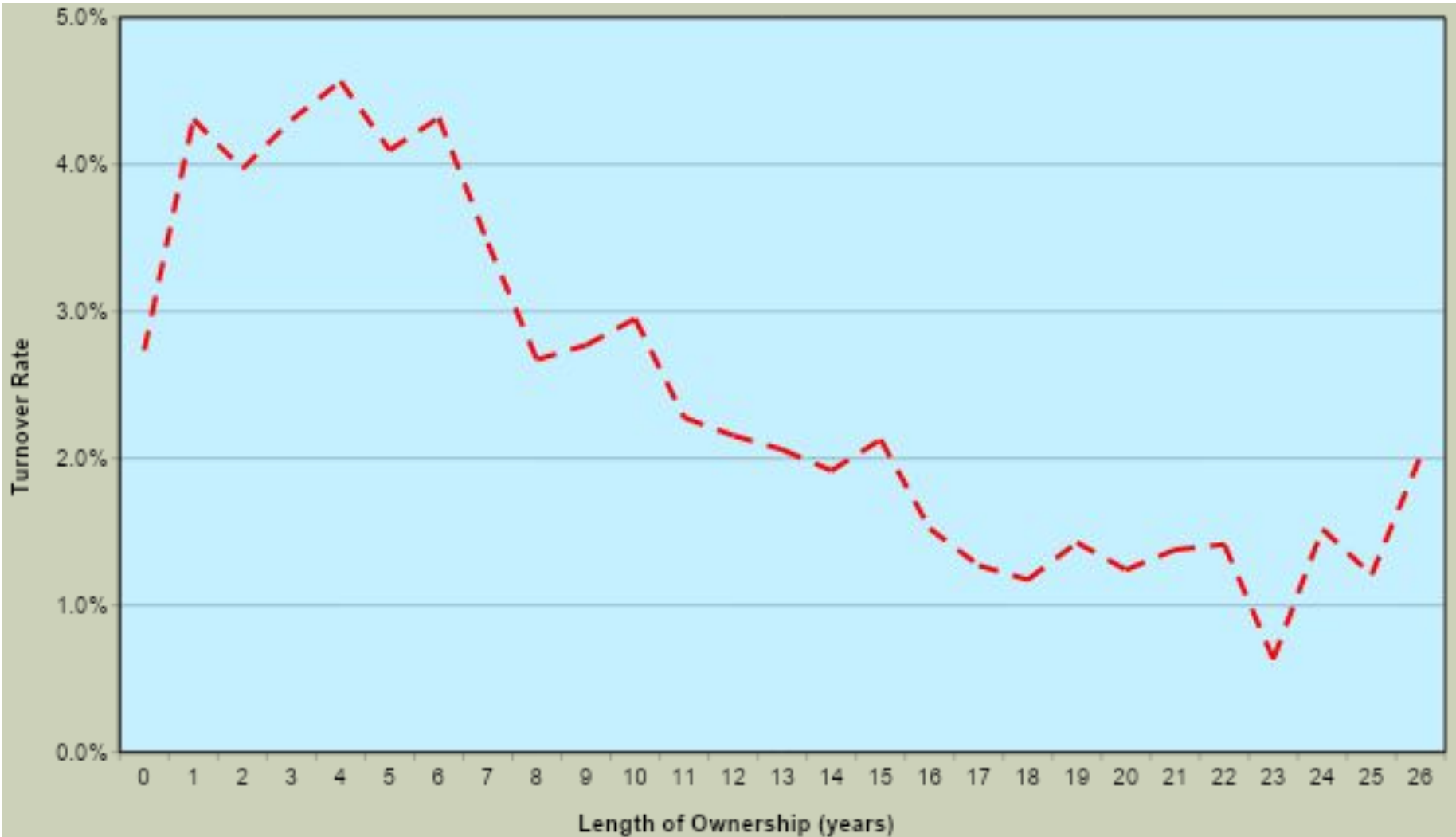
Three inputs:

1. Housing turnover rates by length of ownership
2. Current distribution of homes by length of ownership
3. Student yields by length of ownership

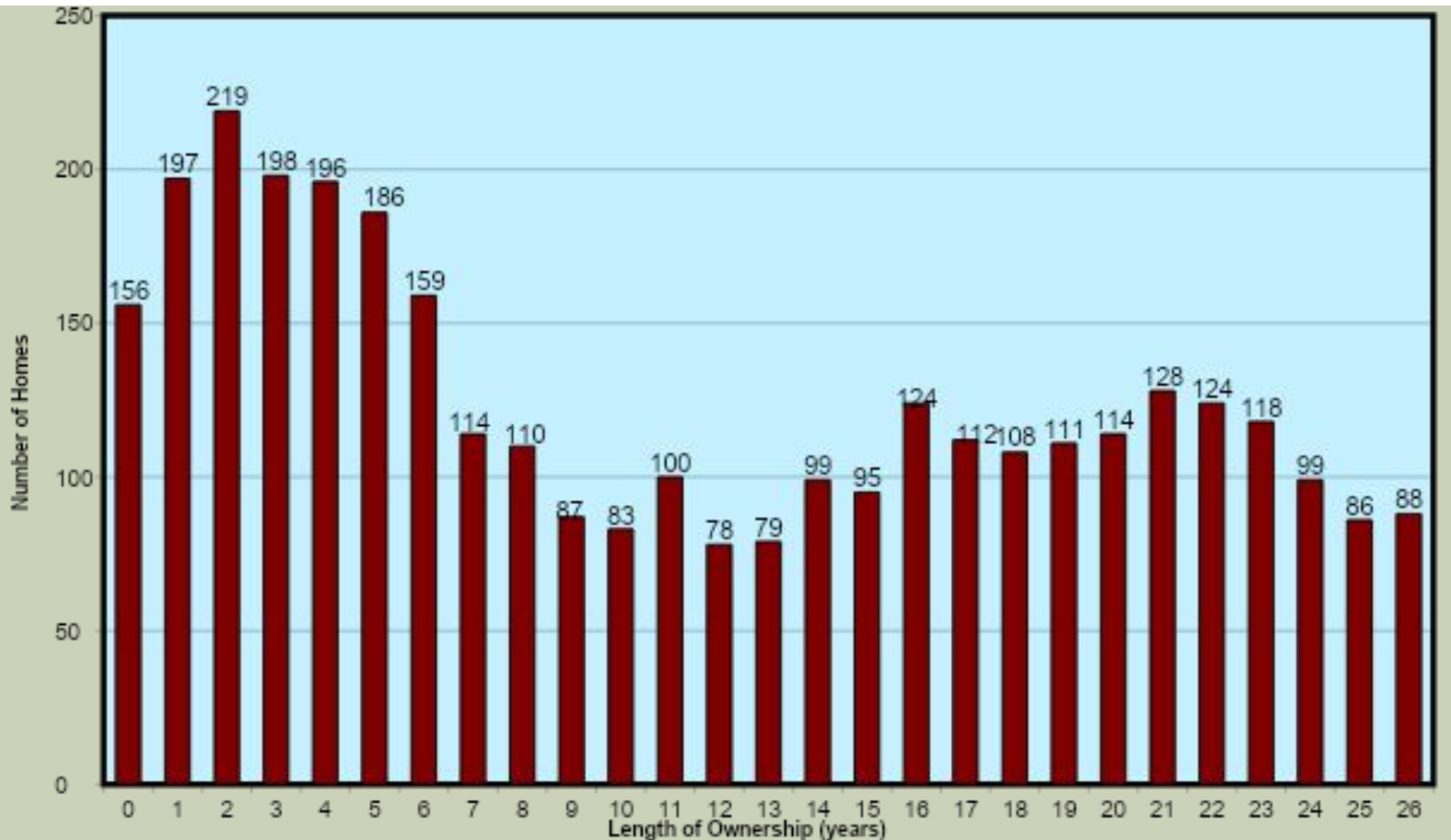
TURNOVER RATES

- Used parcel-level data to track each home through its “lifecycle”. Data contained sale dates, sale prices, and year home was built.
- Sales data were collected from 1994-2020.
- Follow each year’s cohort of homes beginning in 1994 to see when they sell.
- Ex. Home built in 1980 sold in 2002, 2008, and 2012 (part of three cohorts). First length of ownership is 6 years, second length of ownership is 4 years, current length of ownership is 8 years.

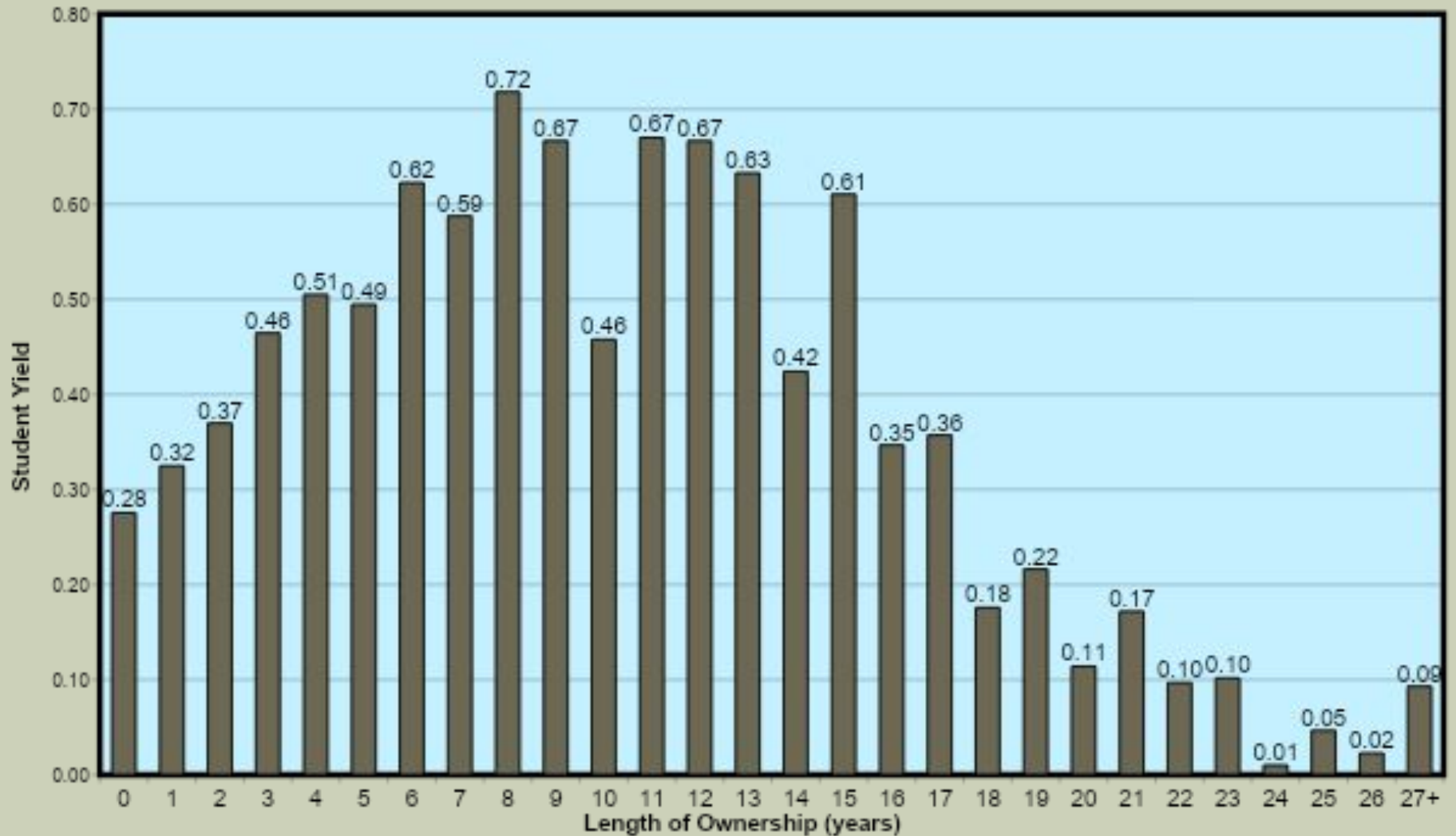
WEIGHTED-AVERAGE TURNOVER RATES BY LENGTH OF OWNERSHIP



CURRENT NUMBER OF HOMES BY LENGTH OF OWNERSHIP



STUDENT YIELDS BY LENGTH OF OWNERSHIP



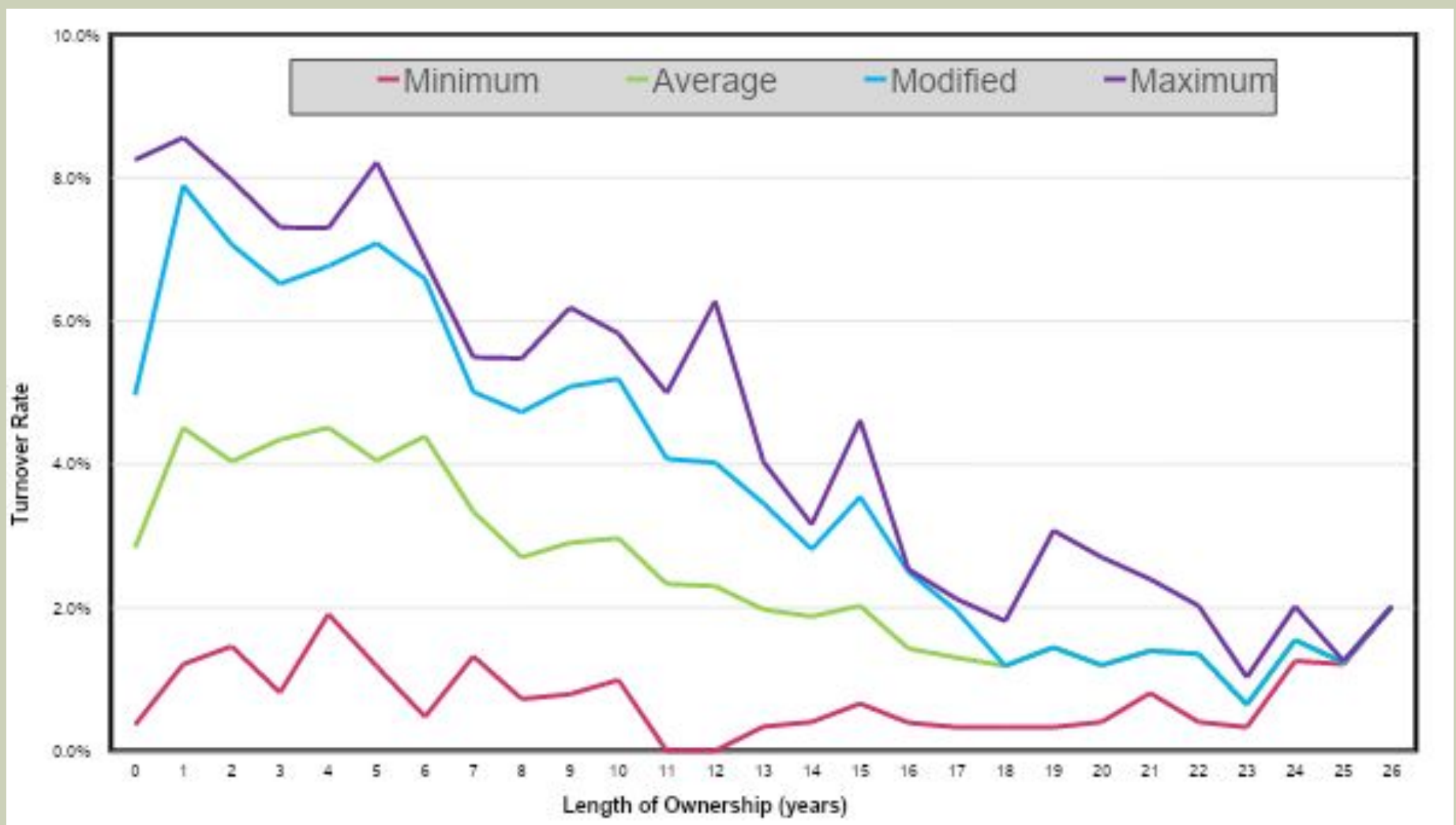
HOUSING TURNOVER PROJECTION METHODOLOGY

- Use current length of home ownership distribution and historical turnover rates to either a) advance homes to next year of ownership or b) sell home and have it return to zero years of ownership.
- Number of homes at each length of ownership is multiplied by student yield at each length of ownership.

SCENARIO 1

	2021	2022	2023	2024	2025
Students from 1- to 4-Family Homes	1,430	1,435	1,439	1,442	1,444
Students from Townhouses, Condos, Apartments, Mixed-use units, no address, or unmatched (constant)	188	188	188	188	188
Total	1,618	1,623	1,627	1,630	1,632

HISTORICAL TURNOVER RATES 1994-2020



SCENARIO 2

	2021	2022	2023	2024	2025
Students from 1- to 4-Family Homes	1,413	1,394	1,381	1,367	1,352
Students from Townhouses, Condos, Apartments, Mixed-use units, no address, or unmatched (constant)	188	188	188	188	188
Total	1,601	1,582	1,569	1,555	1,540

COVID-19

- Effects of COVID-19 on enrollment are varied across the country.
- Vermont has had an increase after years of enrollment decline (15% increase in some towns).
- Big declines in large school districts- L.A (-11,000), Broward County (-8,500), Orange County (-8,000), Charlotte-Mecklenburg (-5,000).
- People are leaving large metro areas to live in rural areas, either in 2nd homes or a purchased home. Will they return?

SUMMARY

- Enrollments (PK-8) are projected to increase throughout the 5-year projection period due to the following:
 1. increasing birth rate
 2. inward migration of students
 3. 300 new housing units.

