



**Testimony of Kyle C. Kopko, Ph.D., J.D.  
Executive Director of the Center for Rural Pennsylvania**

Good morning, members of the Basic Education Funding Commission. Thank you for this opportunity to speak before the Commission. My name is Dr. Kyle C. Kopko, and I serve as the Executive Director of the Center for Rural Pennsylvania.

As you know, the Center is a bipartisan, bicameral legislative research agency of the General Assembly. The Center's legislative mandates include two broad charges: 1) conducting and sponsoring applied policy research to benefit our rural communities; and 2) maintaining a comprehensive database of statistical indicators to assist policymakers in meeting the needs of rural Pennsylvania. I will use information from this database to discuss a variety of population and demographic trends across the Commonwealth. It is my hope that these data will be useful to the Commission as it considers strategies to support schools and students in the coming years.

Along with this written testimony, I have submitted a series of data visualizations that depict Pennsylvania population trends over time. The data visualizations provide a greater level of detail and more information than what I present in this written statement. However, I wish to highlight several key findings for the purpose of this hearing:

1. Based upon recent population projections produced in partnership with the Pennsylvania State Data Center, Pennsylvania's overall population growth rate will diminish considerably in the coming years.
2. The projected population change across the Commonwealth will not be uniform. That is, some regions will experience steady growth over time, while other regions will experience steady declines.
3. The overall change in population is primarily driven by natural population change (i.e., an increase in deaths and a decrease in births).
4. Pennsylvania can expect an increase in the number of older Pennsylvanians (those 65 years old and older), and a decrease in the number of young people (less than 20 years old).

Overall, these findings likely suggest decreased enrollment in many school districts, which, in turn, may raise the per student cost of education and eventually reduce demand for teachers and school buildings.

Before discussing the findings of our empirical analysis, it is important to provide a brief description of our research methodology. We relied on a variety of data sources from both federal and state agencies to produce the enclosed data visualizations. Throughout our analysis, we define rural as an area with a population density below the statewide rate of 291 people per square mile. All

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other areas are classified as urban.

The population projections that will be discussed throughout my testimony were made possible through the Center's research grant program, and our long-standing partnership with the State Data Center at Penn State Harrisburg. The State Data Center estimated county-level population projections for each county in Pennsylvania through the year 2050. These projections are based upon U.S. Census data and projected births, deaths, and migration patterns. More information on the population projections can be found on our website: [www.rural.pa.gov/data/population-projections](http://www.rural.pa.gov/data/population-projections).

## **I. Population Bifurcation**

The population projections discussed above suggest that Pennsylvania's population will grow by just 1.6 percent between 2020 and 2050. As a point of reference, Pennsylvania's population grew at approximately 2.4 percent between 2010 and 2020.

These projections suggest that Pennsylvania's population will continue a long-standing pattern of regional bifurcation. That is, population is generally growing in the southeast region, while population is generally declining in other parts of the Commonwealth. By the southeast, we are including counties that are east of Interstate 81 from Franklin to Lebanon counties and south of Interstate 78 from Berks to Northampton counties. However, as noted in the included data visualizations, there are some exceptions to this regional bifurcation. For example, counties like Centre County, Indiana County, and Union County are projected to experience population growth. However, these counties are home to significant "group quarters," including universities and prisons.

When applying the Center's definition of rural and urban counties to the projections, the population in rural counties is expected to decline by 5.8 percent, while urban counties are expected to grow by 4.1 percent. Although Pennsylvania's overall population is expected to grow slightly in the coming decades, the non-uniform nature of this change by region will mean local and state officials will need to adopt strategies to meet the specific local needs resulting from a changing population.

## **II. Factors Affecting Population Change**

Population change is driven by two factors: natural population change (i.e., births and deaths) and net migration (i.e., in-migration and out-migration). While Pennsylvania has generally experienced positive net migration in recent years, that trend has not been uniform. Before the onset of the COVID-19 pandemic, net migration in rural counties was negative since 2005, while urban counties have witnessed positive net migration patterns. However, the primary driver of population change is an imbalance between births and deaths. Over time, Pennsylvania's birth rate has steadily declined, while its death rate has steadily increased. This has resulted in a relative increase in the number of Pennsylvanians who are 65 years of age or older, and a relative decrease in the number of people under the age of 20. As a point of reference, in 2020, 26 counties had more senior citizens (65 years of age or older), relative to people under 20. By the end of this decade, the population projections suggest that 53 counties will have more senior citizens than young people.

## **III. Changes in School District Enrollments**

The population projections noted above will necessarily affect the number of school-aged children

across the Commonwealth, and the demand for teachers and school buildings. Based upon projections from the Pennsylvania Department of Education, the statewide enrollment rate for school-aged students will decline by 6.7 percent by the 2032-2033 school year. However, this change will not be uniform, with much of the growth in the next ten years occurring in the southeast and in urban counties.

Based upon the Department of Education projections, the Center was able to estimate an average student-to-teacher ratio and student-to-building ratio, relying on a three-year average of the last three school years. The building ratio is specific to elementary school buildings. While this is admittedly an imperfect methodological approach, by holding the ratios constant over time policy makers can better understand how changes in projected enrollment and population affect the demand for teachers and school buildings. As the data visualizations included with my testimony indicate, there will be approximately a 7.0 percent decline in the demand for classroom teachers, and approximately a 5.5 percent decline in the demand for elementary school buildings.

#### **IV. Conclusion**

The results that I have discussed as part of this presentation are consistent with regional trends. What is happening in Pennsylvania, particularly in our rural communities, is not unlike demographic trends that have, or are expected to occur, in western New York, Ohio, West Virginia, and western Maryland. In brief, the trends we are now experiencing have been decades in the making.

While these changes will be challenging for many communities, I am confident that with advanced planning and appropriate resources, school districts and local officials across the Commonwealth can use this information to adapt to changing population conditions. To that end, the Center for Rural Pennsylvania is happy to serve as a resource for any communities who could benefit from data and information to aid in their long-term planning efforts.

Thank you for the opportunity to speak before the Commission, and I welcome the opportunity to answer your questions.



## **Pennsylvania Demographic Trends and Their Implications for Public Education**

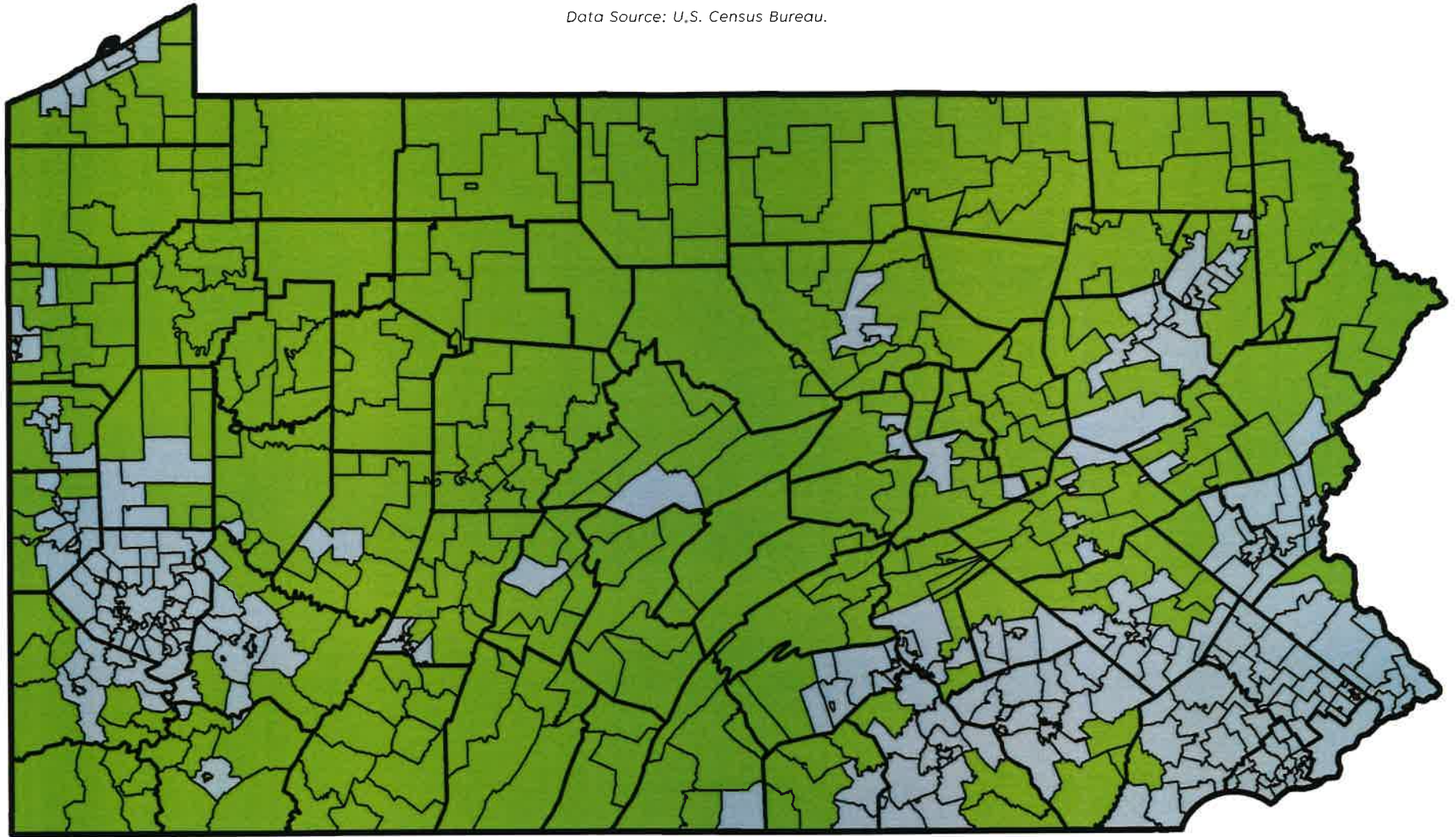
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Testimony Before the Basic Education Funding Commission  
November 9, 2023  
Bedford, Pennsylvania



# Pennsylvania Rural and Urban School Districts, 2020

Data Source: U.S. Census Bureau.

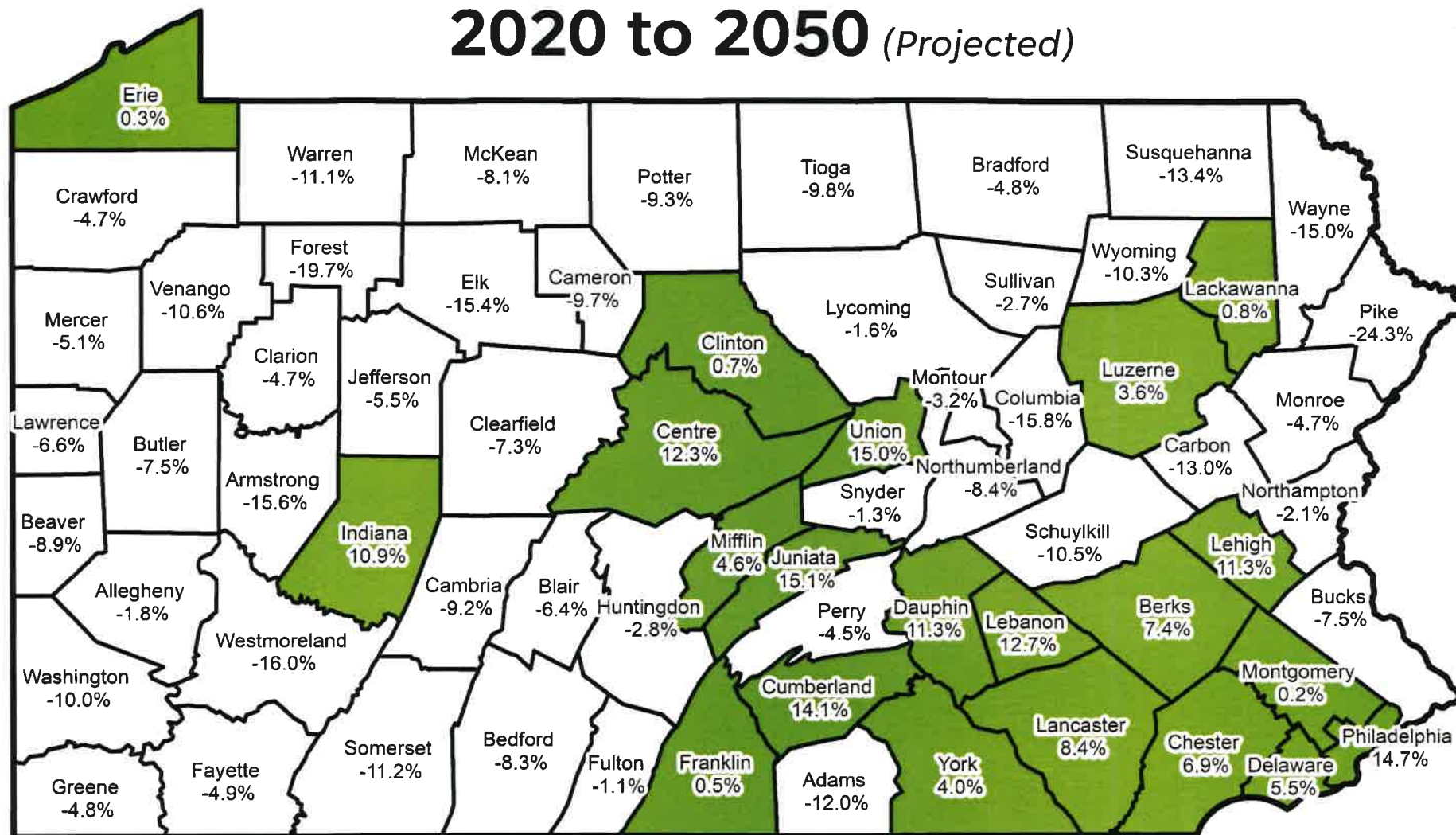


Urban  
Rural

	Rural Districts	Urban Districts
# School Districts	238	262
Avg. District Enrollment, 2022-23	1,563	4,365
% Chg. 2012-13 to 2022-23	-12.7%	-4.5%

# **Population Change**

# Population Change by County, 2020 to 2050 (Projected)



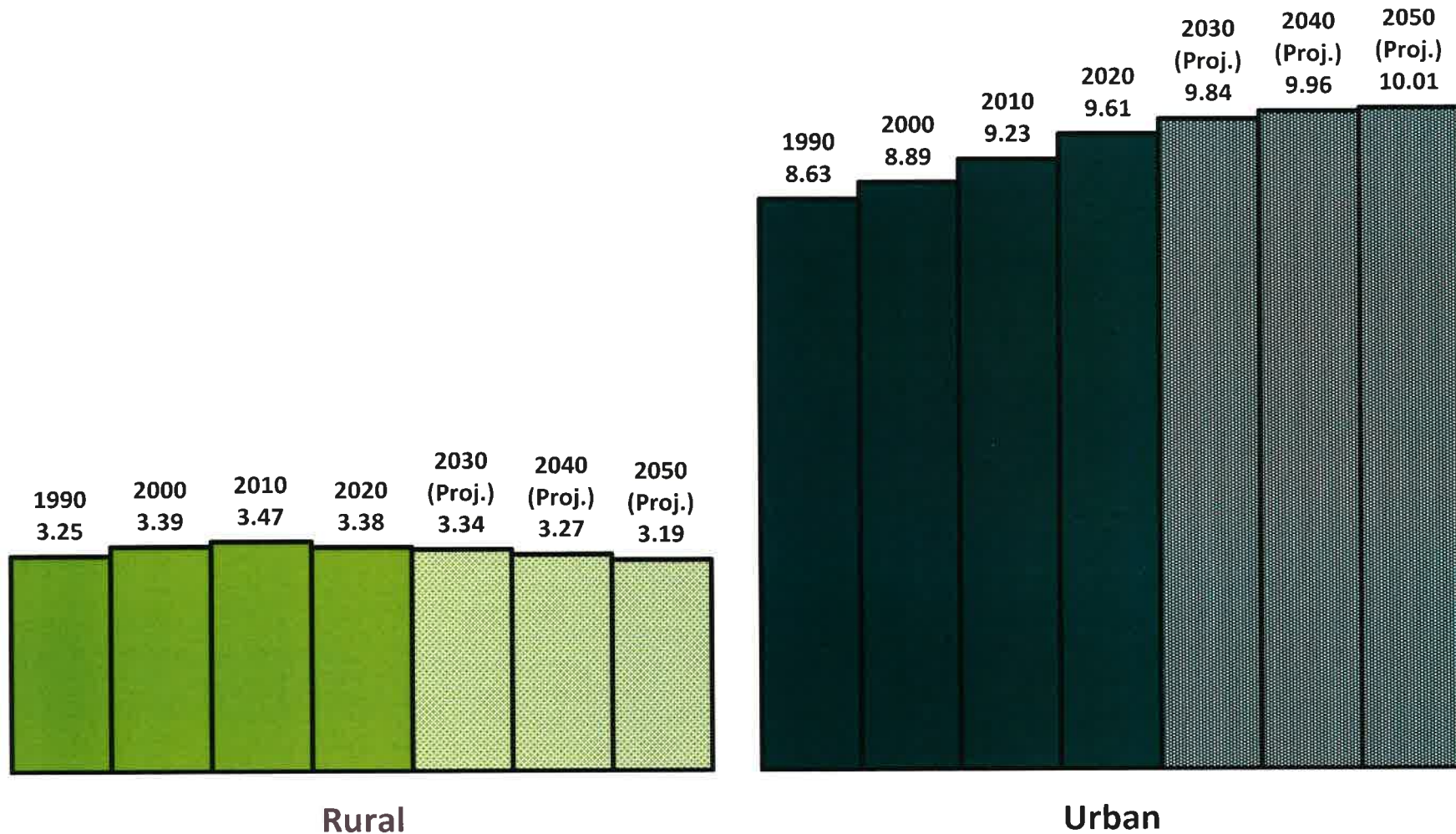
Statewide Population Change, 2020 to 2050 (proj.) = 1.6%

- Decrease or No Change
- Increase



# Pennsylvania Rural and Urban Counties Population, 1990 to 2050

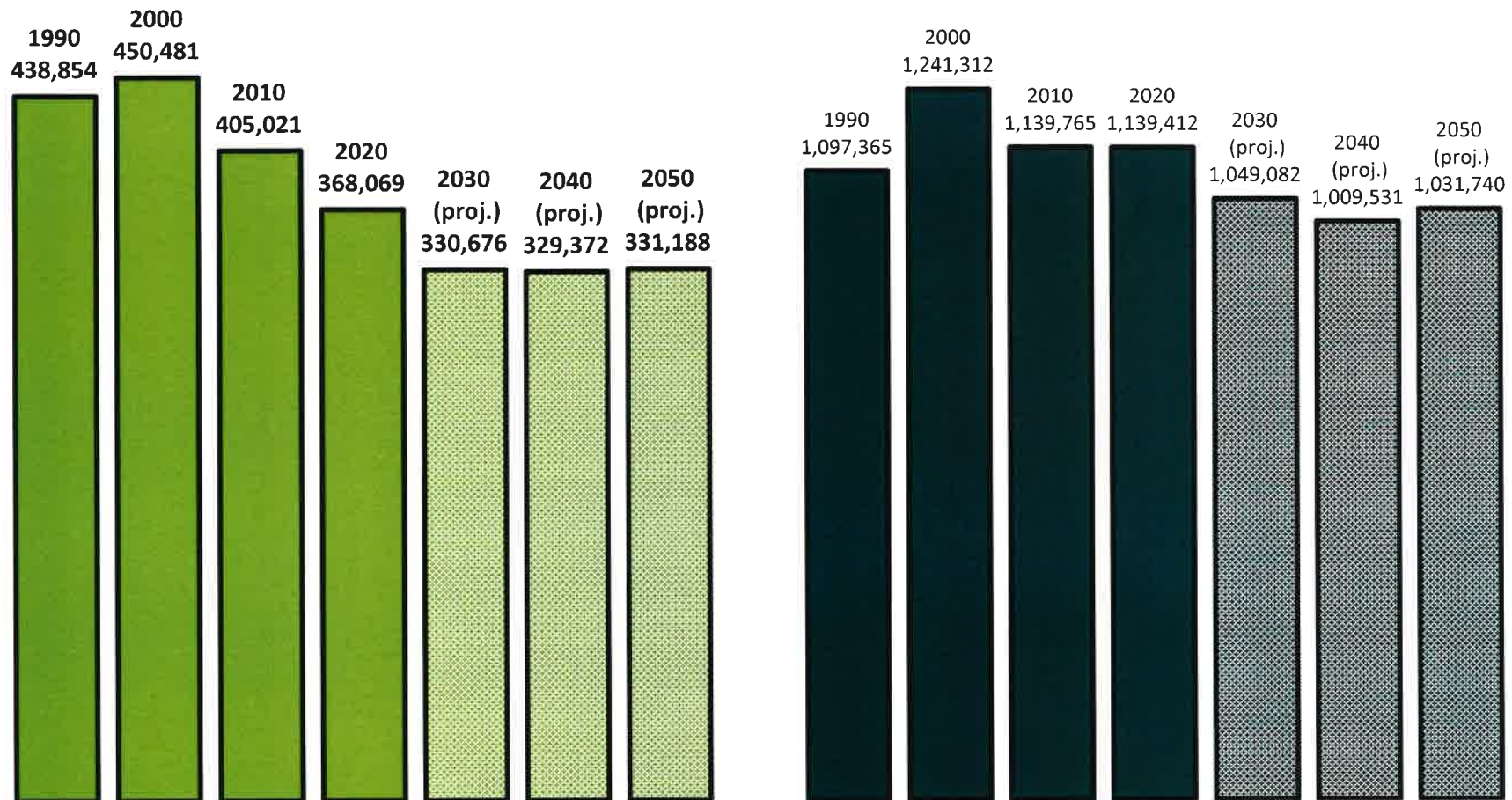
(Projected) (in Millions)



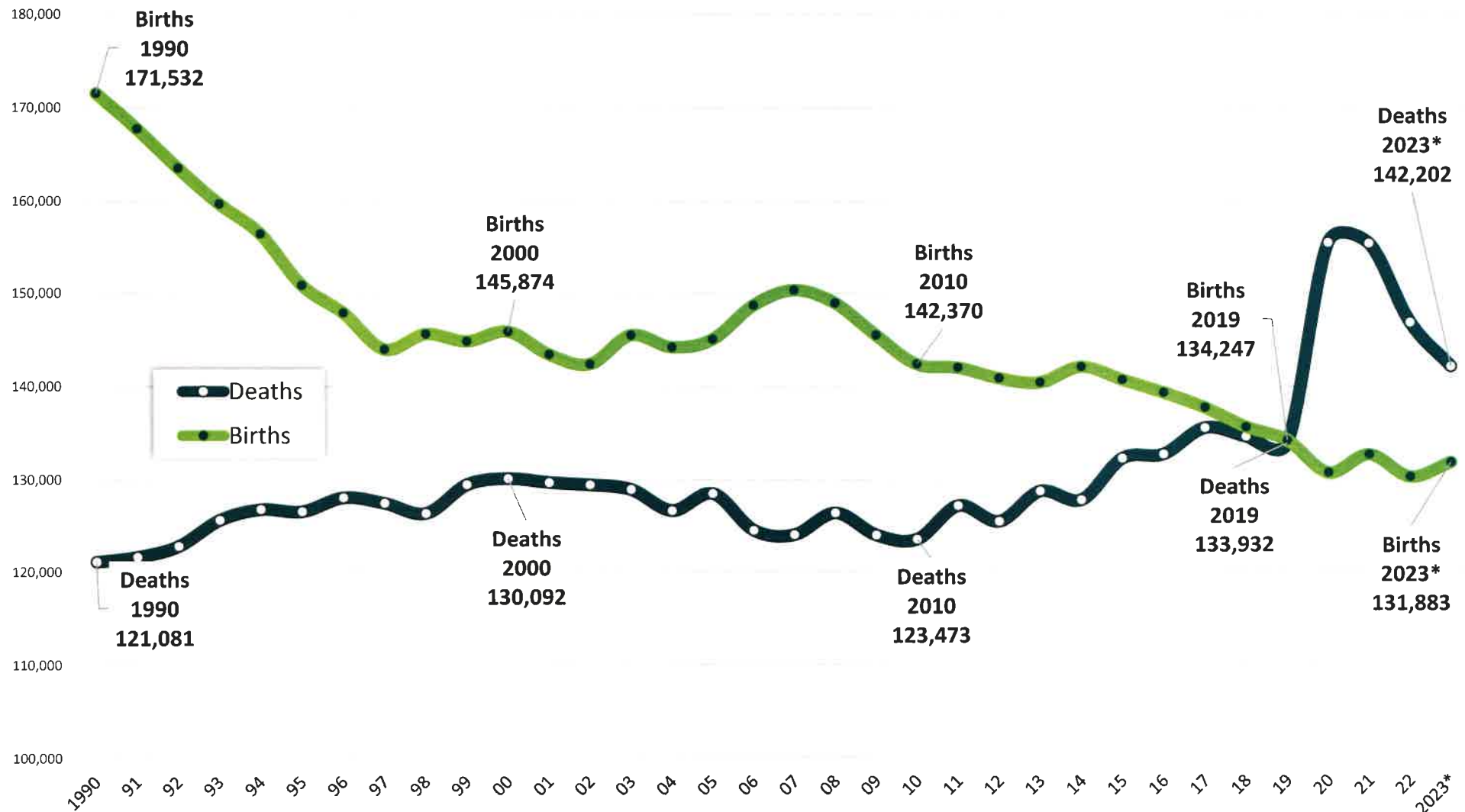


# **Causes of Population Change**

# Children 5 to 14 Years Old in Rural and Urban Pennsylvania, 1990 to 2050 *(Projected)*



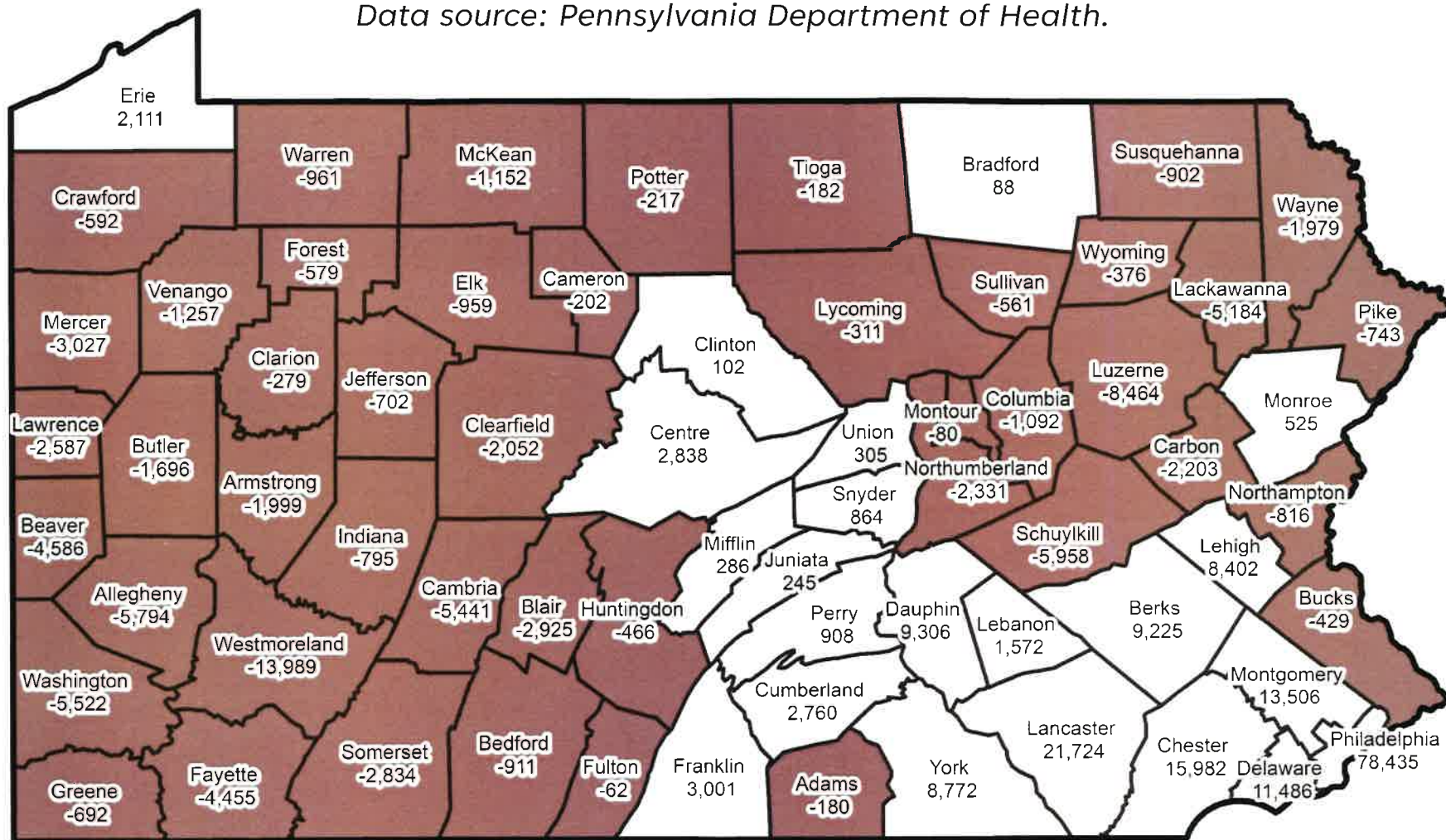
# Number of Births and Deaths in Pennsylvania, 1990 to 2023\*



\*2023 Births and Deaths are Projections by the Pennsylvania Department of Health.  
Data source: Pennsylvania Department of Health.

# Natural Population Change (Births Minus Deaths) by County, 2010 to 2019

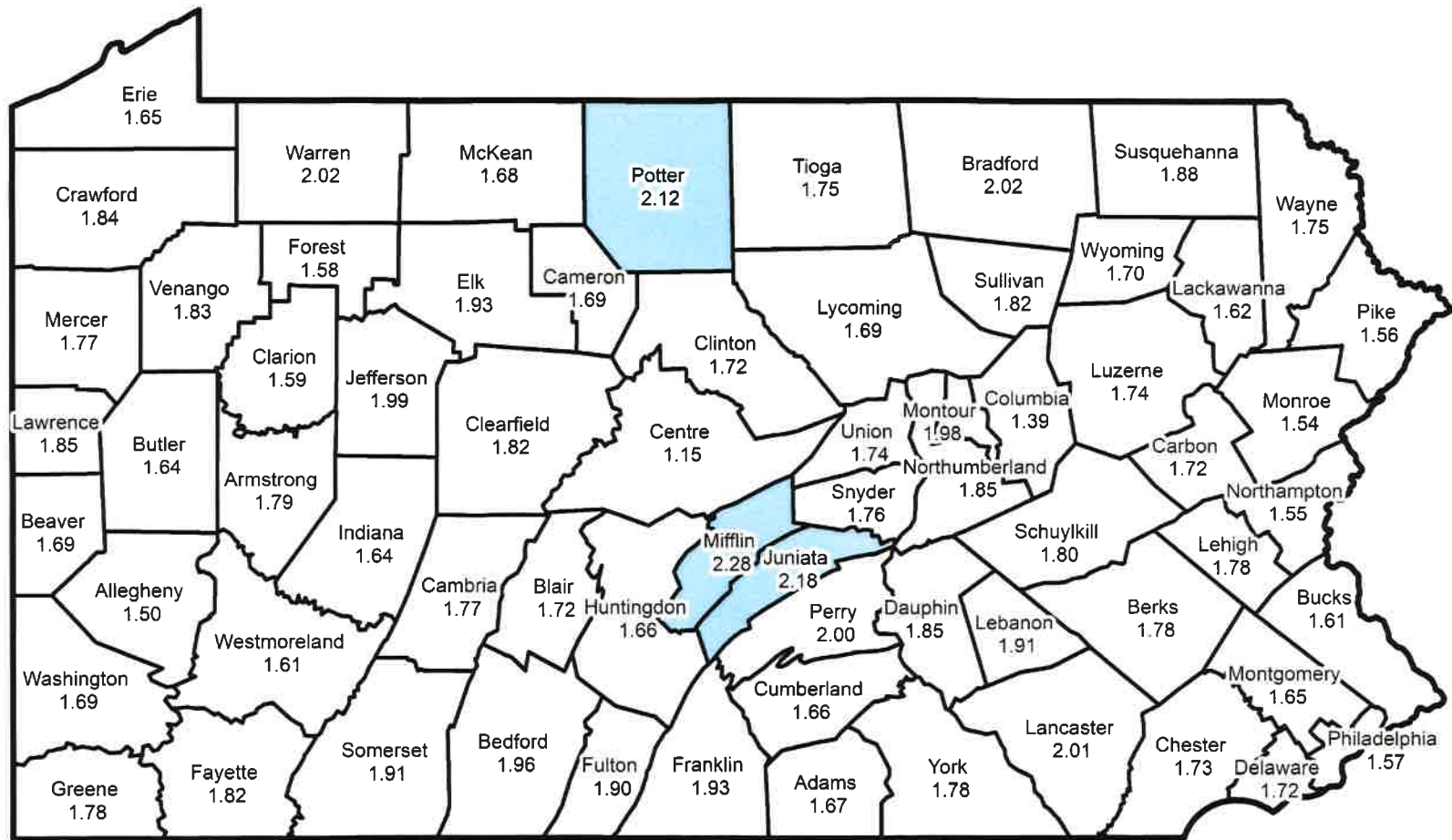
Data source: Pennsylvania Department of Health.



- More Deaths than Births (Neg. Natural Change)
- More Births than Deaths (Pos. Natural Change)



# Total Fertility Rates by County, 2016-2020



**Total Fertility Rate Replacement Level = 2.10+**



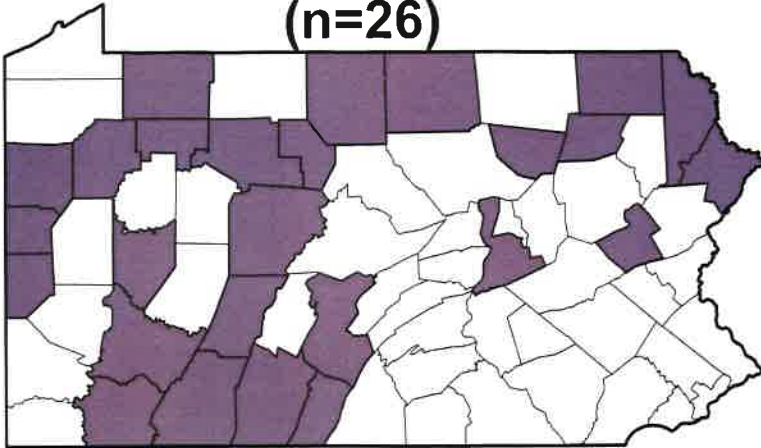
According to the CDC, the total fertility rate (TFR) estimates the number of births that a hypothetical group of women would have over their lifetimes, based on age-specific birth rates in a given year. Replacement level for the TFR is the level at which a given generation can exactly replace itself (generally considered to be 2.1 births per woman). Data for Pennsylvania counties are for women aged 15 to 44 years old. Data sources: Pennsylvania Department of Health and the U.S. Centers for Disease Control and Prevention (CDC).

**Top Five States with the Highest Total Fertility Rates, 2016 to 2020**

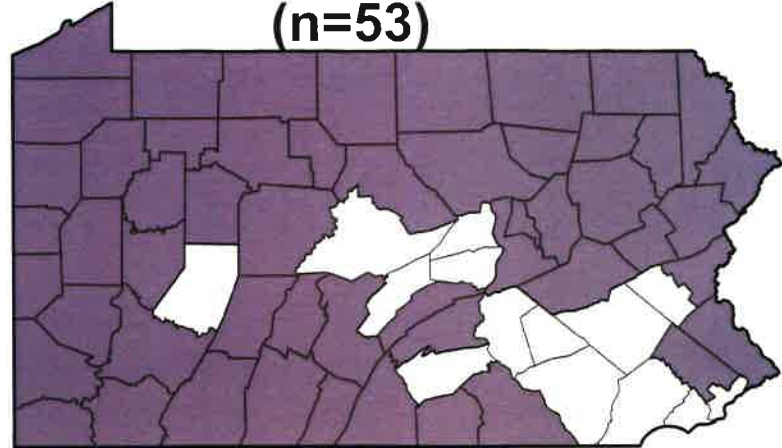
1. South Dakota = 2.13
2. Utah = 2.05
3. North Dakota = 2.03
4. Nebraska = 2.02
5. Alaska = 1.99
- ...
39. Pennsylvania = 1.67

# Counties With More People 65+ Than People <20 Years Old

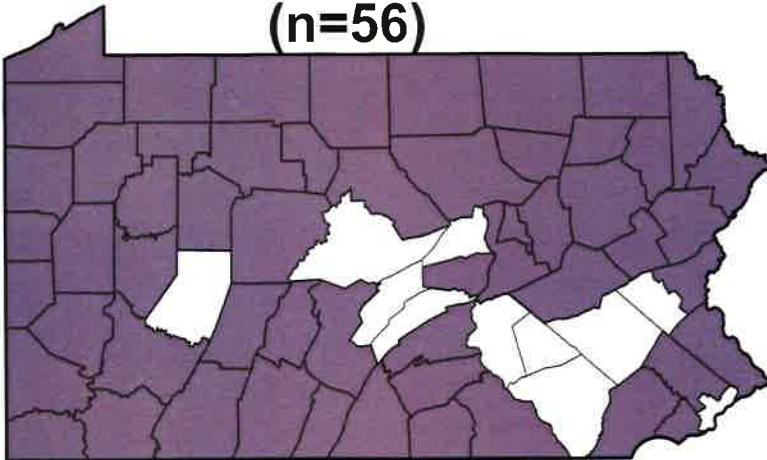
2020  
(n=26)



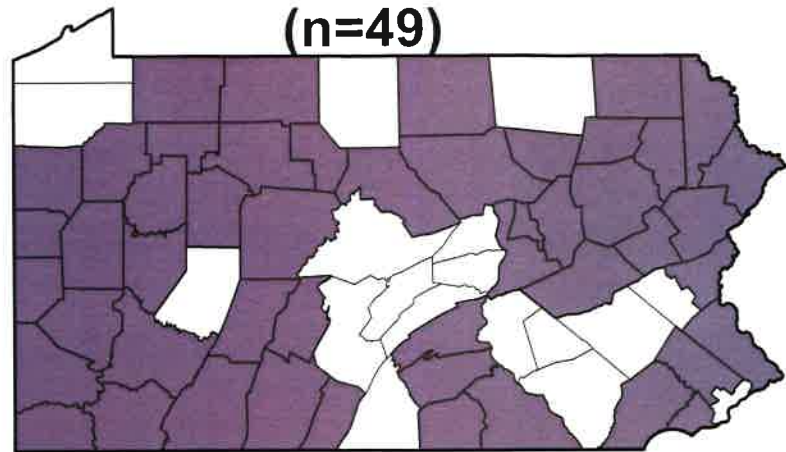
2030 (proj.)  
(n=53)



2040 (proj.)  
(n=56)



2050 (Proj.)  
(n=49)

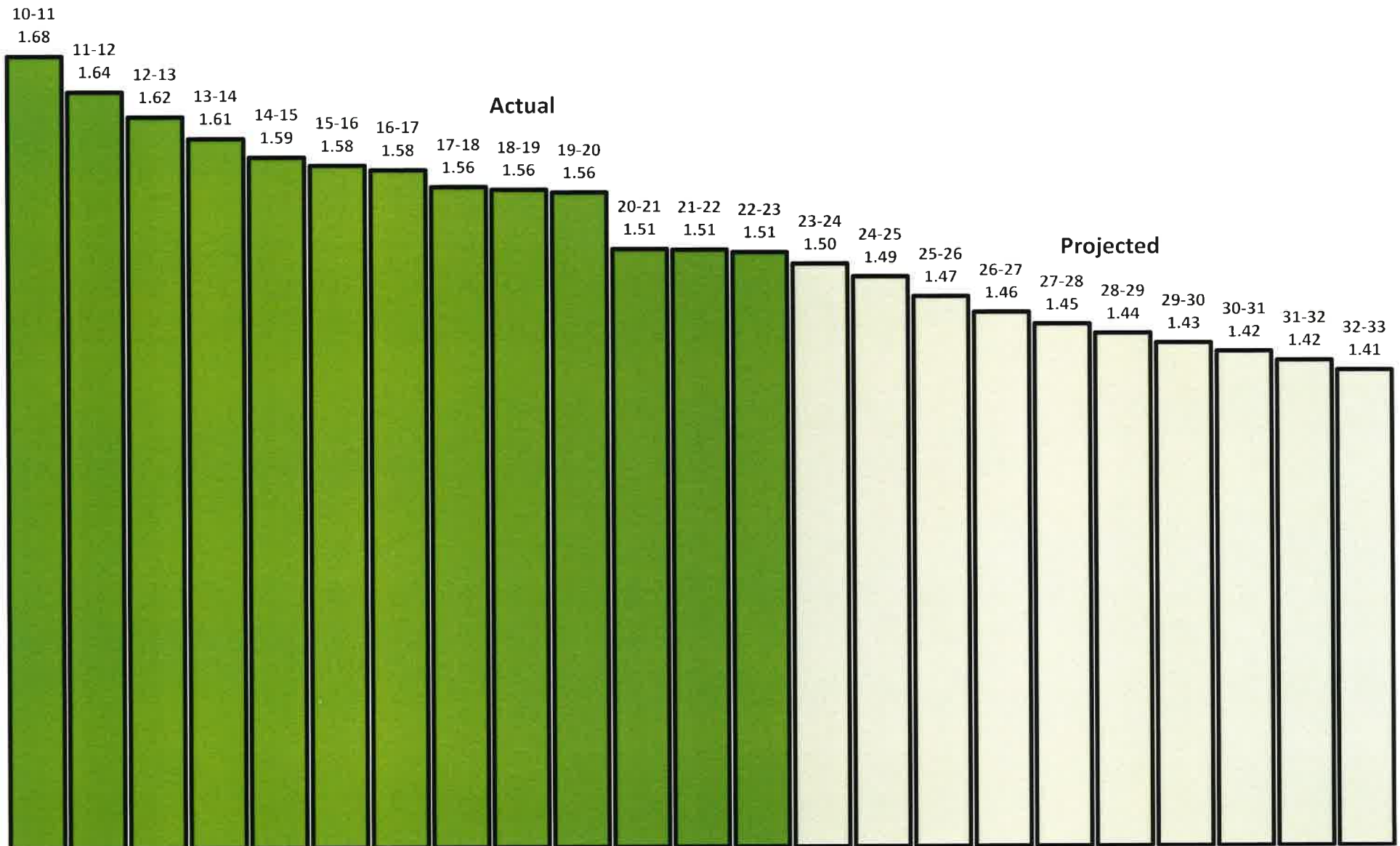


# **Impact of Population Change on Enrollment**

# Projected Statewide School District Enrollment, 2010-11 to 2032-33

(In millions)

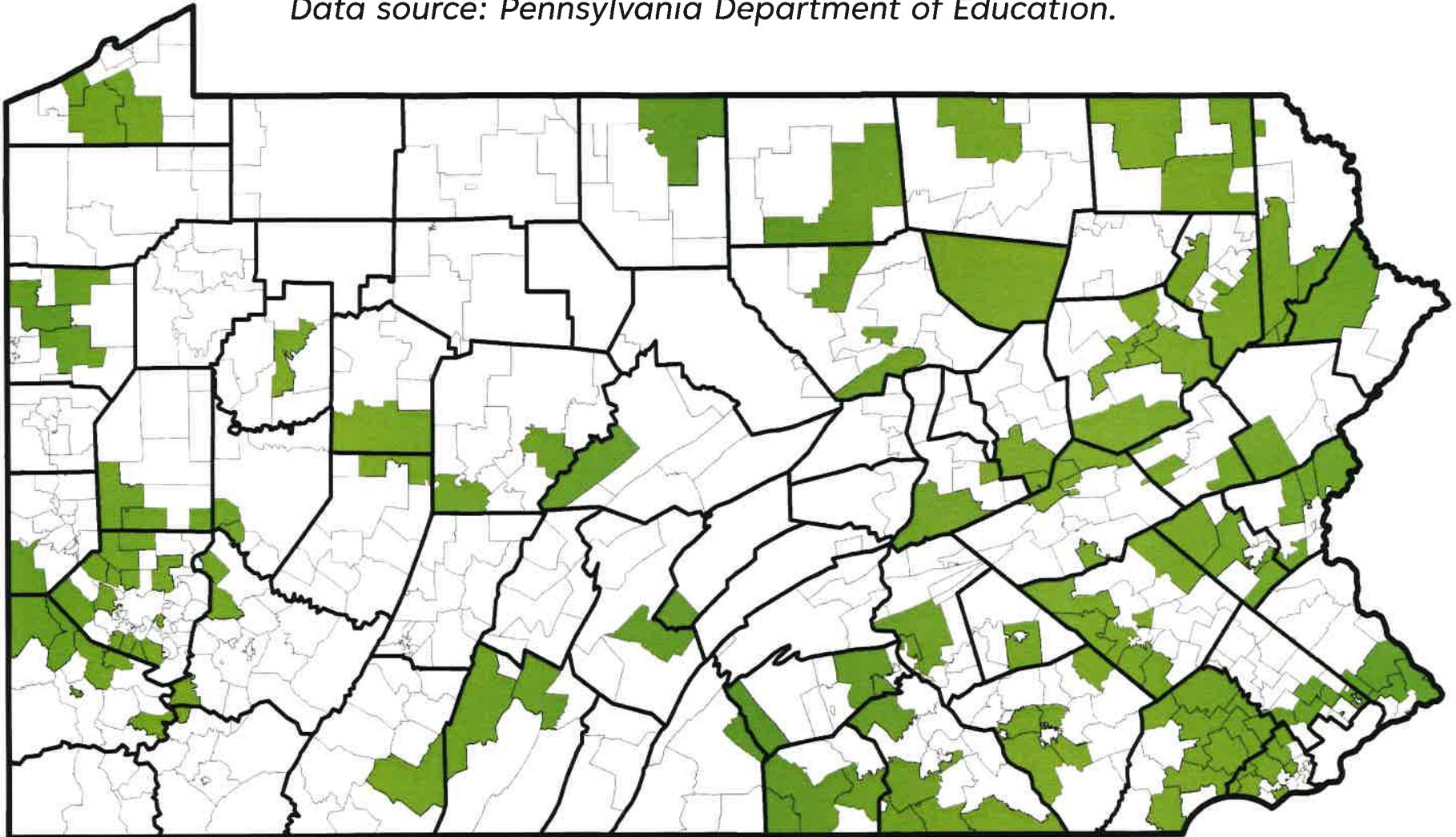
Data source: Pennsylvania Department of Education.





# Projected Change in Enrollment by School District, 2022-23 to 2032-33

*Data source: Pennsylvania Department of Education.*



**Statewide Change in Enrollment, 2022-23 to 2032-33 (proj.) = -6.7%**

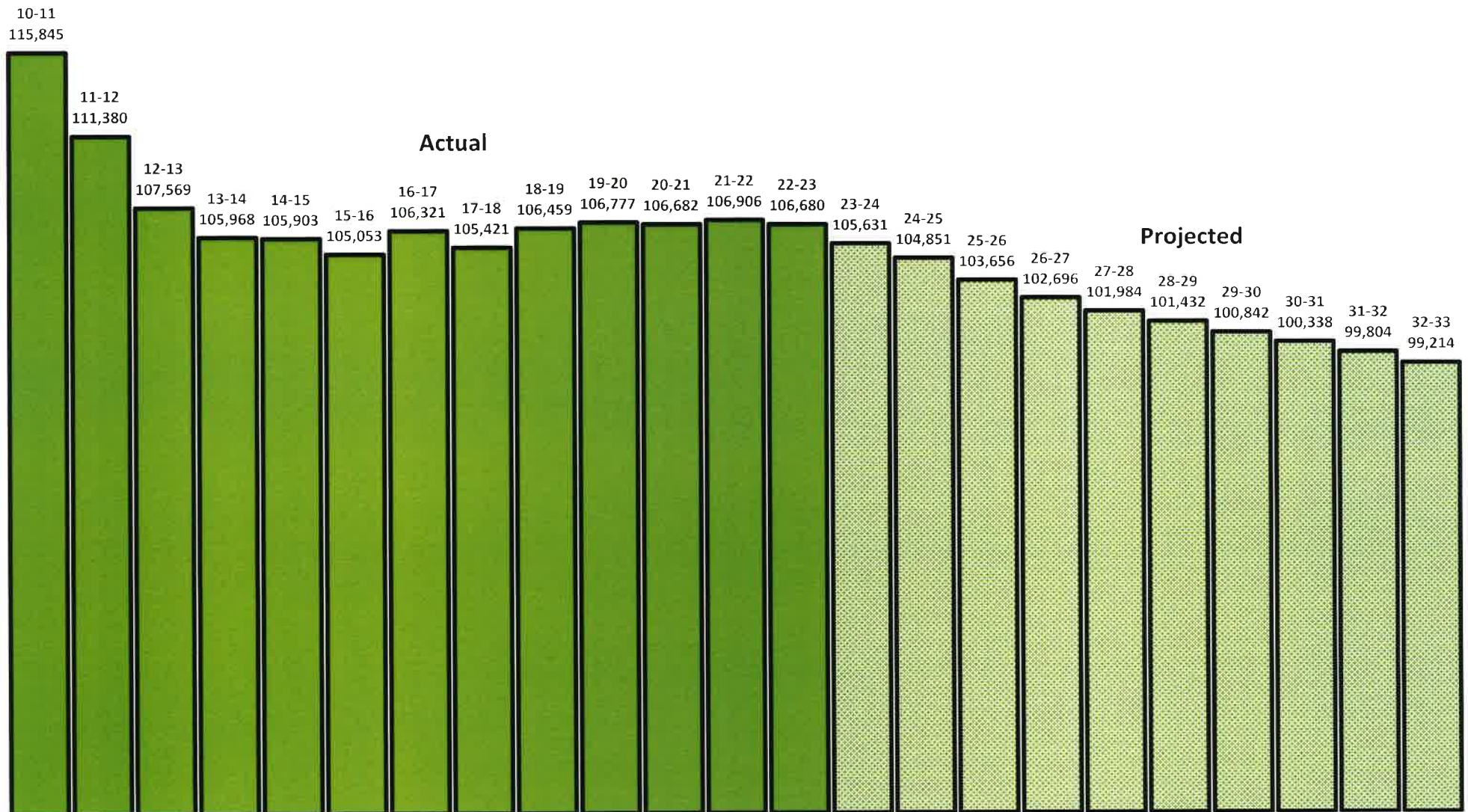
 Decrease or No Change in Enrollment  Increase in Enrollment

# **Impact of Population Change on Teacher Demand**

# Projected Demand for Classroom Teachers, 2010-11 to 2032-33

*The projections are based on the three-year average student teacher ratio, 2020-21 to 2022-23.*

*Data source: Pennsylvania Department of Education.*

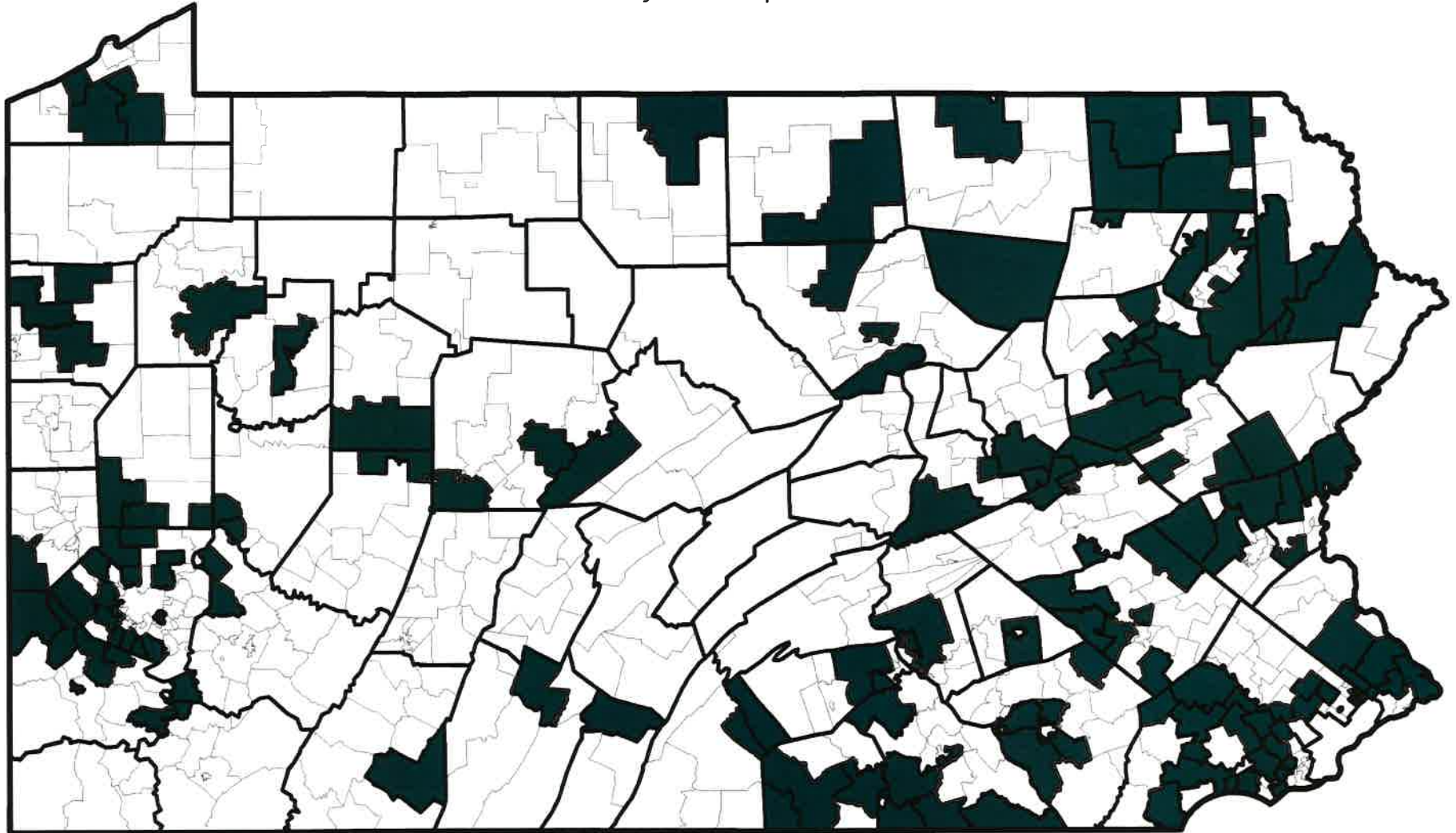




# Projected Change in Classroom Teachers by School District, 2022-23 to 2032-33

*The projections are based on the three-year average student teacher ratio, 2020-21 to 2022-23.*

*Data source: Pennsylvania Department of Education.*



**Statewide Change in Classroom Teachers, 2022-23 to 2032-33 (proj.) = -7.0%**

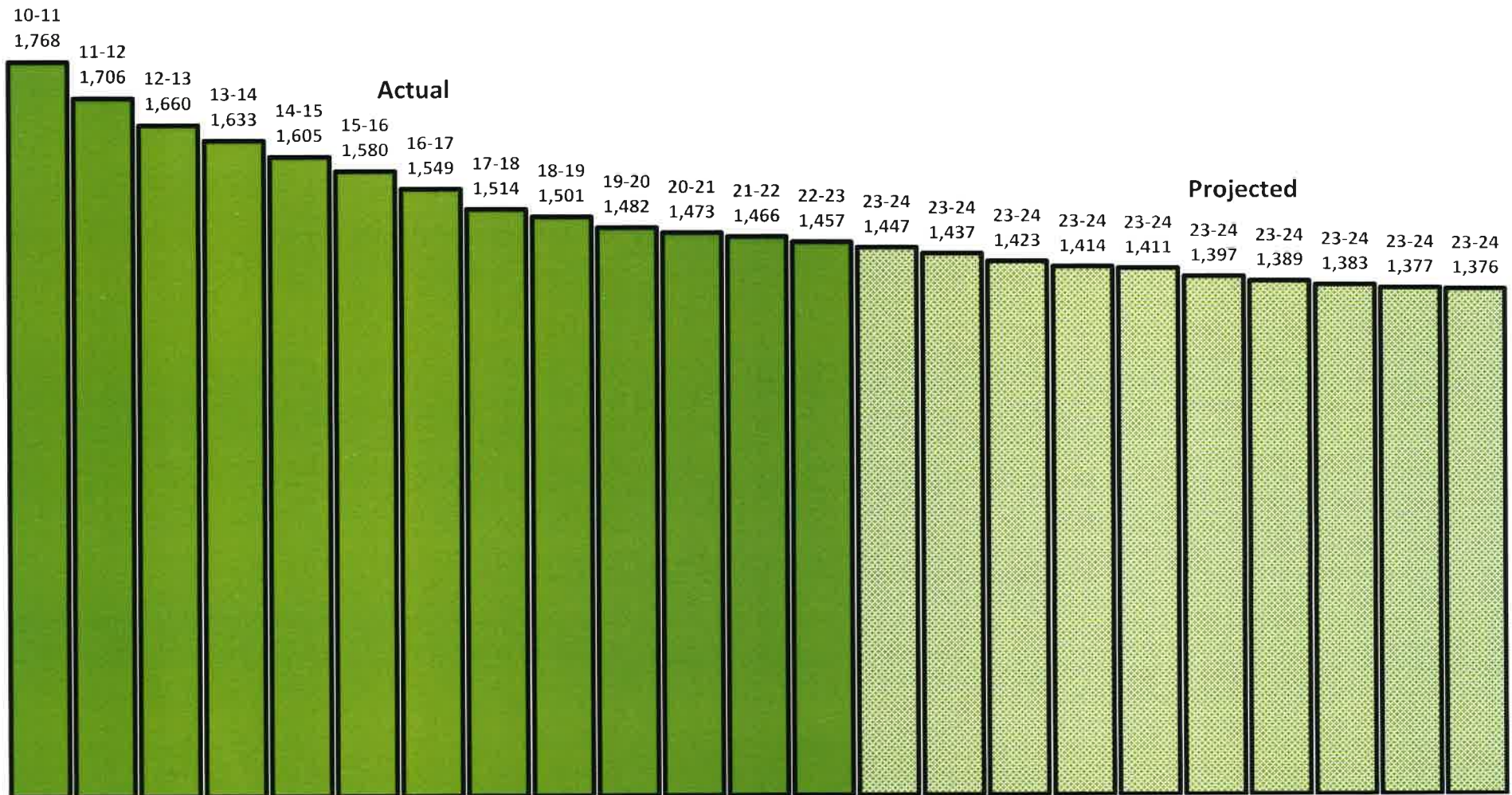
 Decrease or No Change  Increase



# **Impact of Population Change on School Buildings**

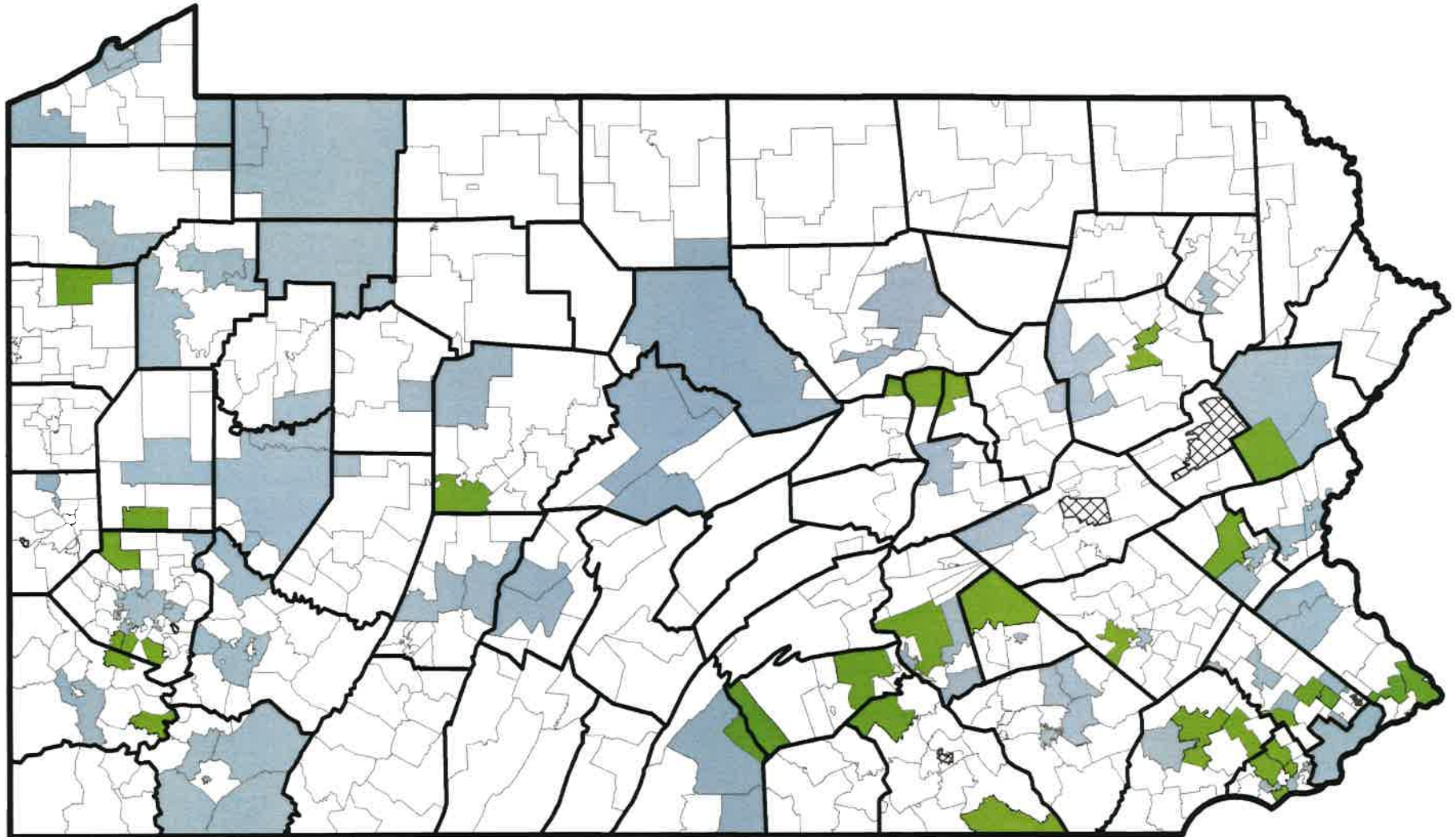
# Projected Demand for Elementary School Buildings, 2010-11 to 2032-33

*The projections are based on the three-year ratio of average elementary students (grades K-6) to elementary school buildings. 2020-21 to 2022-23. The schools include only those school buildings classified as elementary by the Pennsylvania Department of Education. Excluded are school buildings that are classified as both elementary and secondary school buildings. Data source: Pennsylvania Department of Education.*



# Projected Change in Elementary School Buildings by School District, 2022-23 to 2032-33

*The projections are based on the three-year ratio of average elementary students (grades K-6) to elementary school buildings, 2020-21 to 2022-23. The schools include only those school buildings classified as elementary by the Pennsylvania Department of Education. Excluded are school buildings that are classified as both elementary and secondary school buildings. Data source: Pennsylvania Department of Education.*



**Statewide Change in Elementary School Buildings, 2022-23 to 2032-33 (proj.) = -5.5%** Center for



# Conclusion

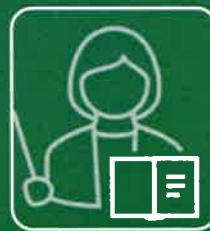




This is a long-term trend, and it is unlikely to change in the near term.



There are significant regional differences in population changes.



In the future, Pennsylvania will likely need fewer teachers and school buildings.



Pennsylvania is not alone.



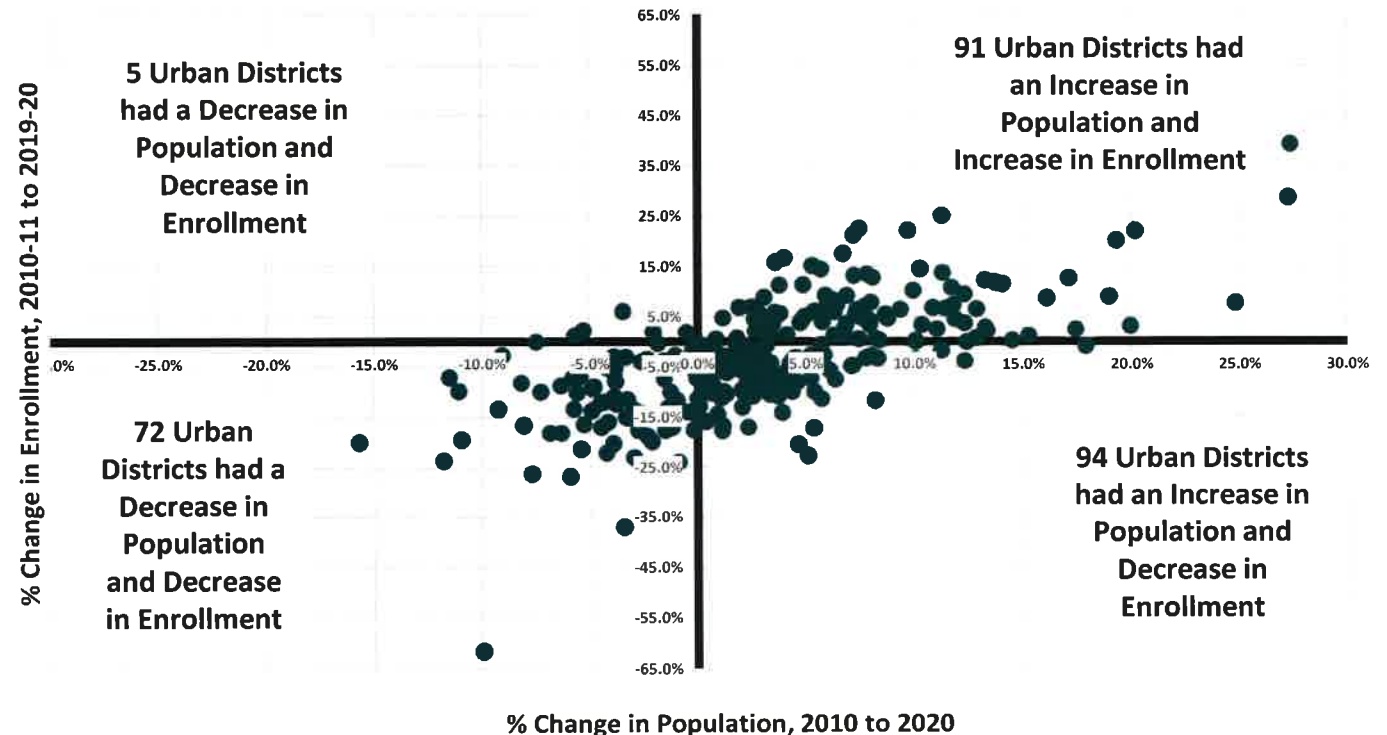
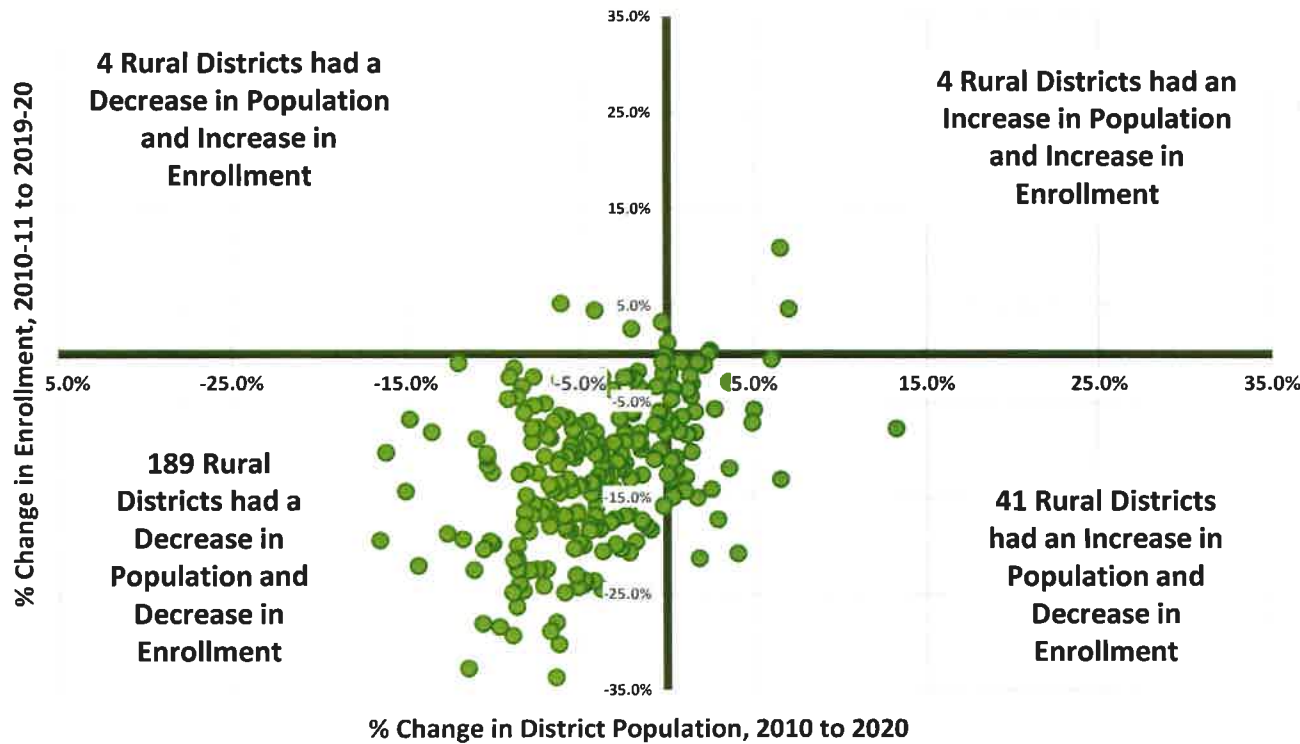
## Thank You

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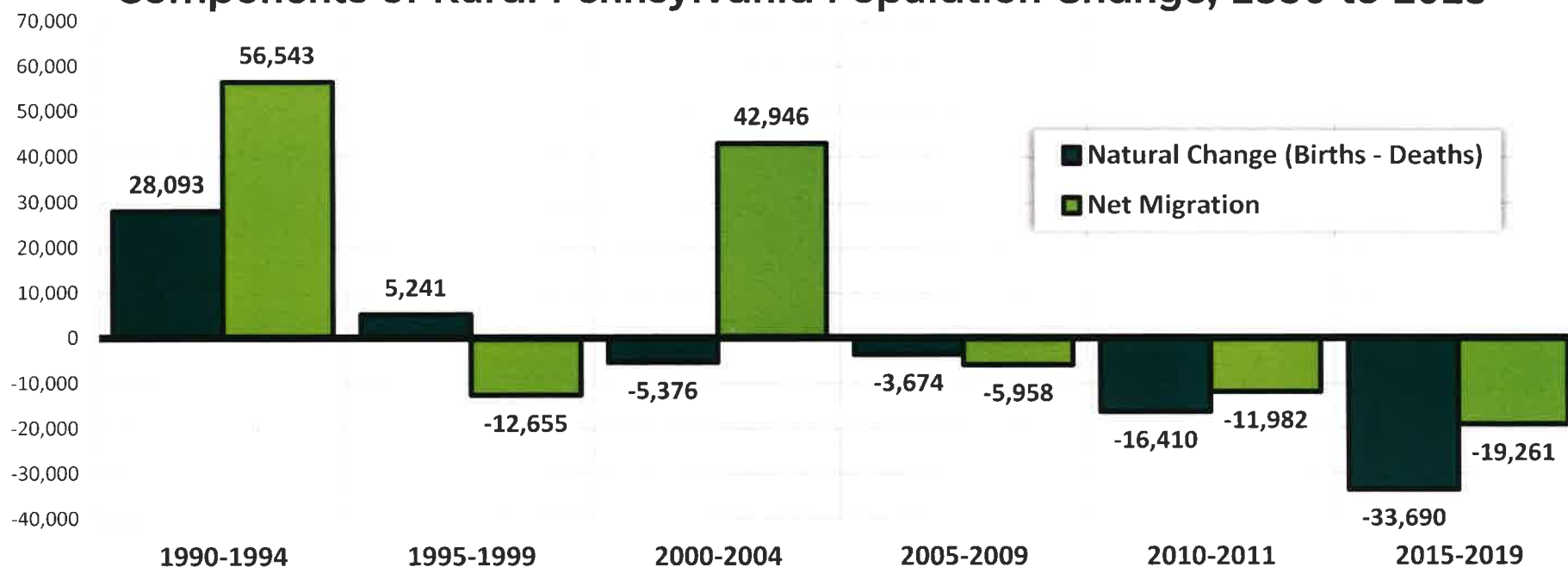
# **Appendix: Supplemental Material**

# Relationship Between Population Change and Enrollment Change in Rural and Urban School Districts

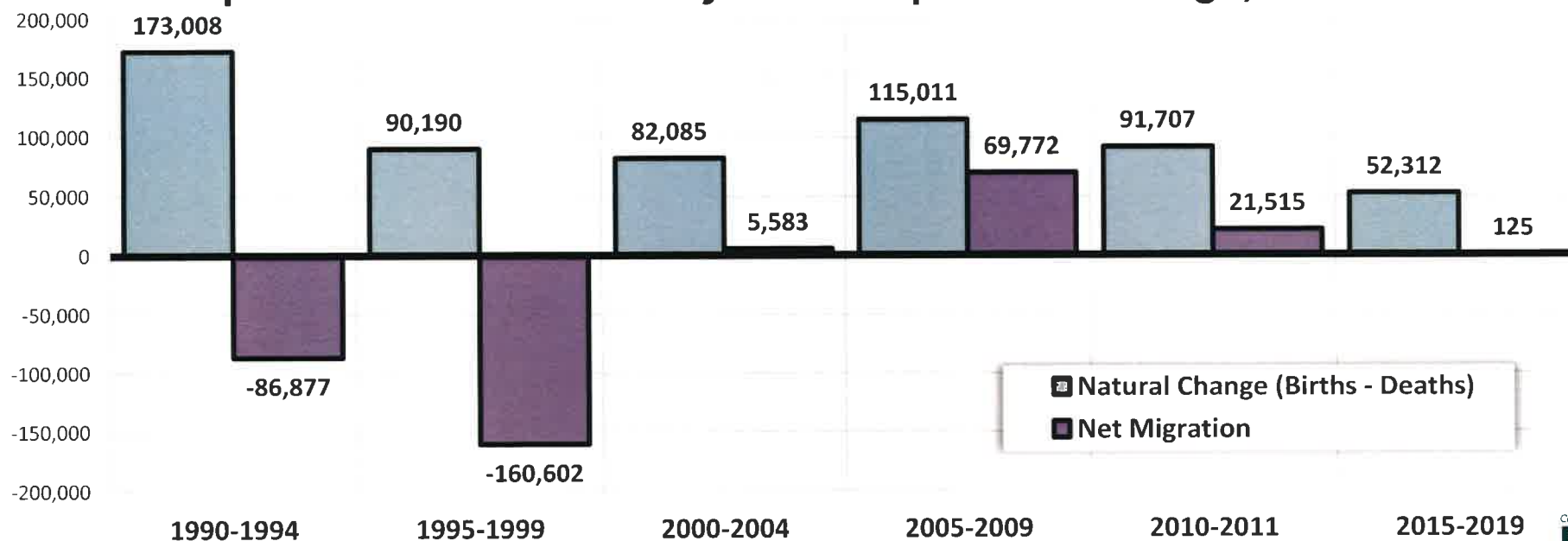




## Components of Rural Pennsylvania Population Change, 1990 to 2019



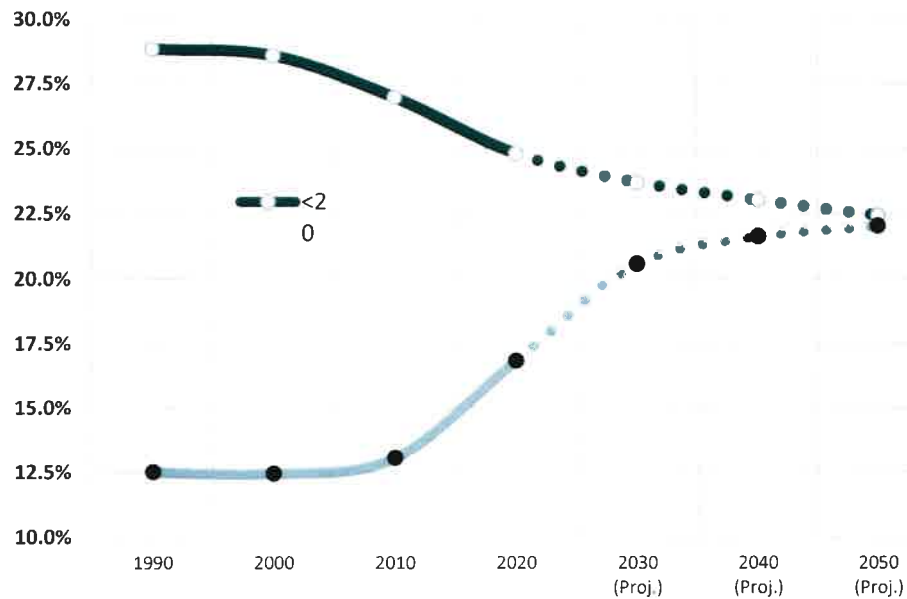
## Components of Urban Pennsylvania Population Change, 1990 to 2019



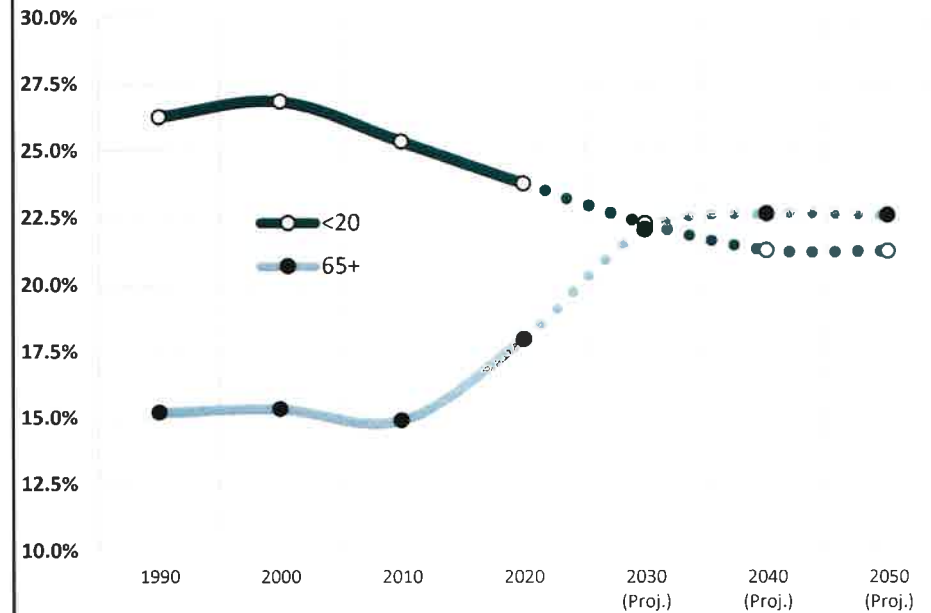
Net Migration are estimates. Data source: Pennsylvania Department of Health.

# Percent of Under 20 Years Old and 65 Years Old and Older

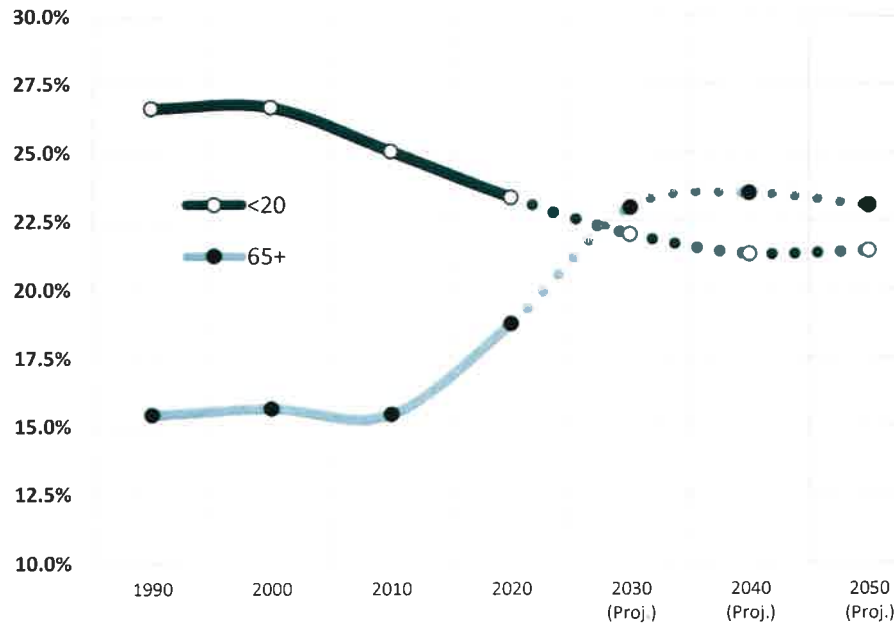
## United States



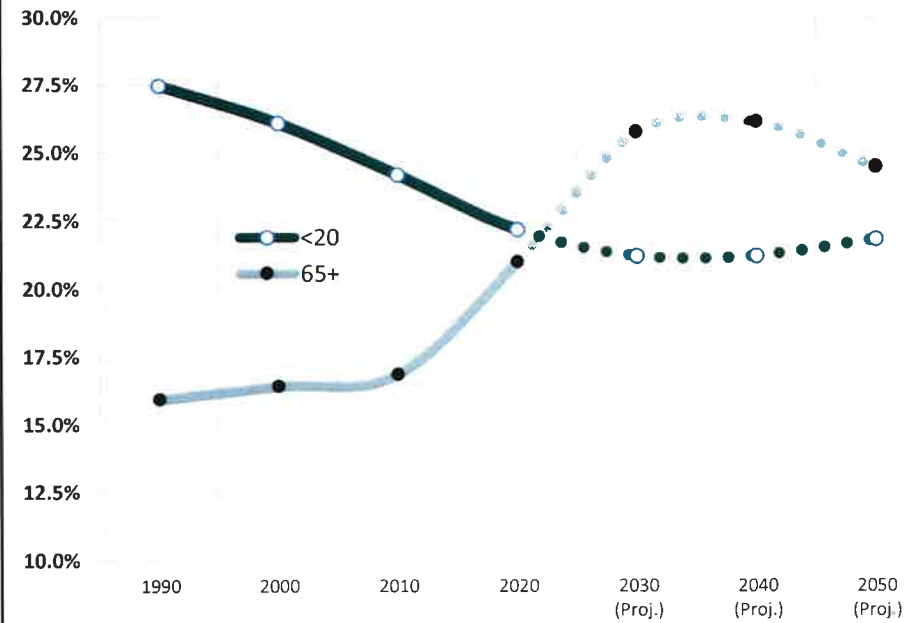
## Urban Pennsylvania



## Pennsylvania



## Rural Pennsylvania



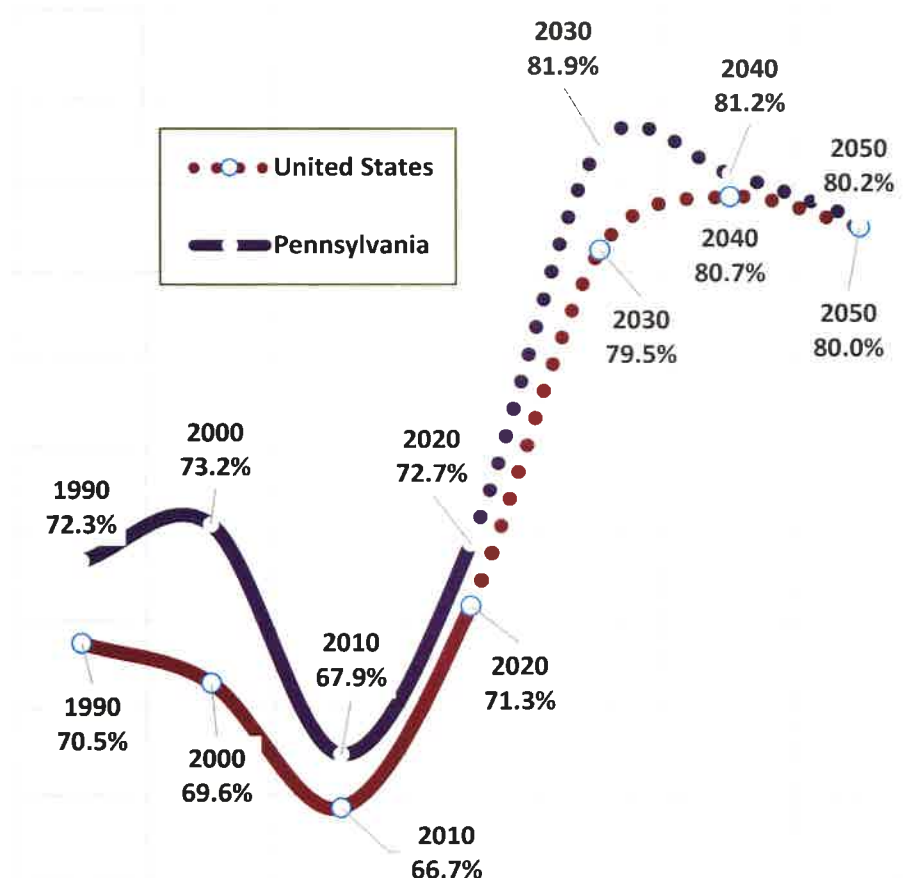
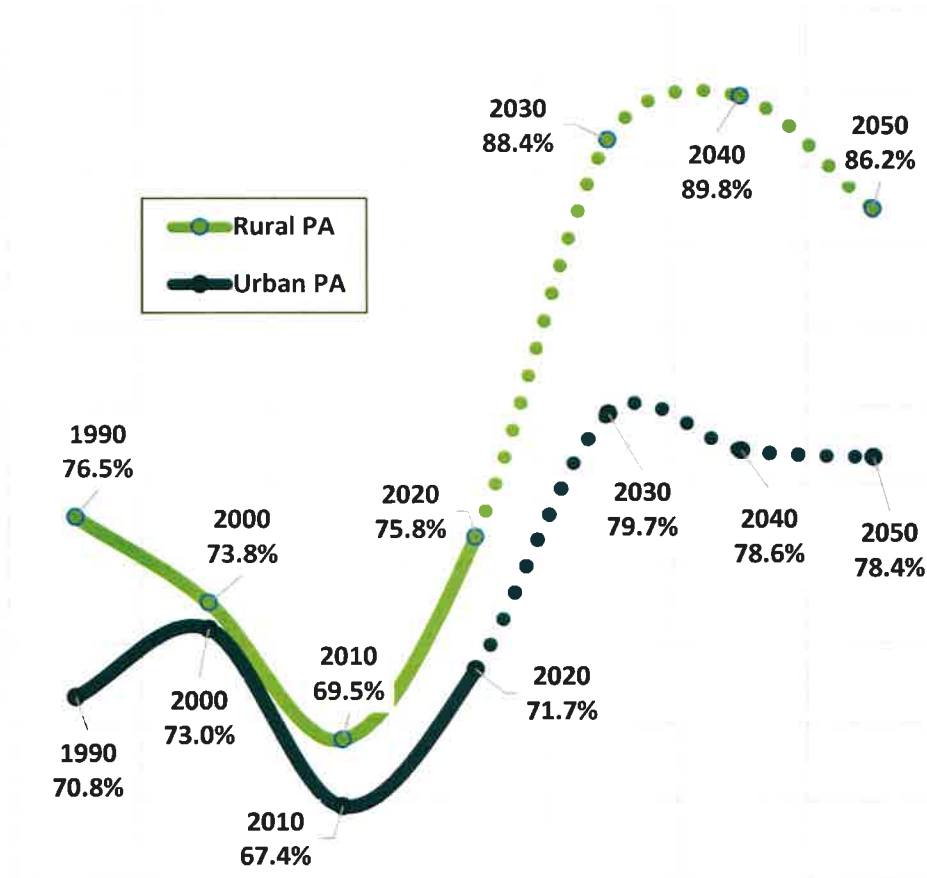
# Age Dependency Ratios, 1990 to 2050 (Projected)

## Age Dependency Ratio Formula

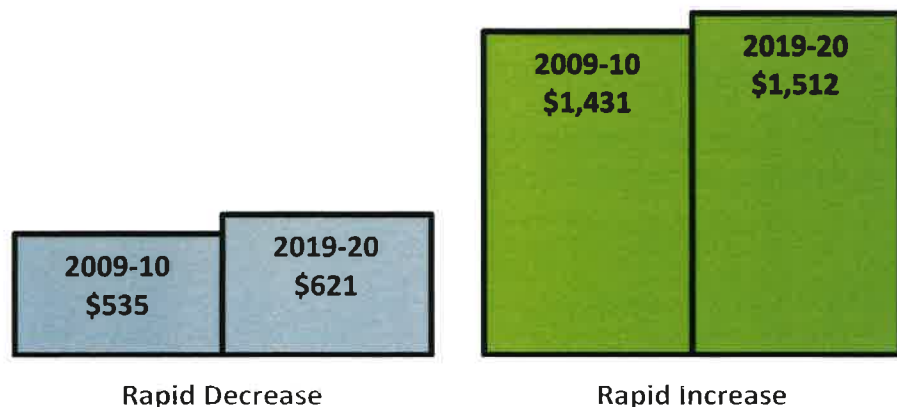
$$\frac{\text{Population } <20 \text{ Years Old} + \text{Population } 65+ \text{ Years Old}}{\text{Population } 20 \text{ to } 64 \text{ Years Old}}$$

### Rural and Urban Pennsylvania

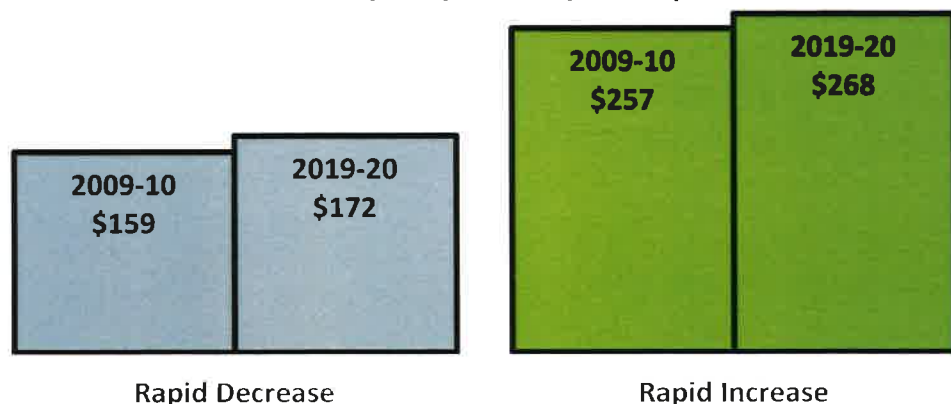
### Pennsylvania and United States



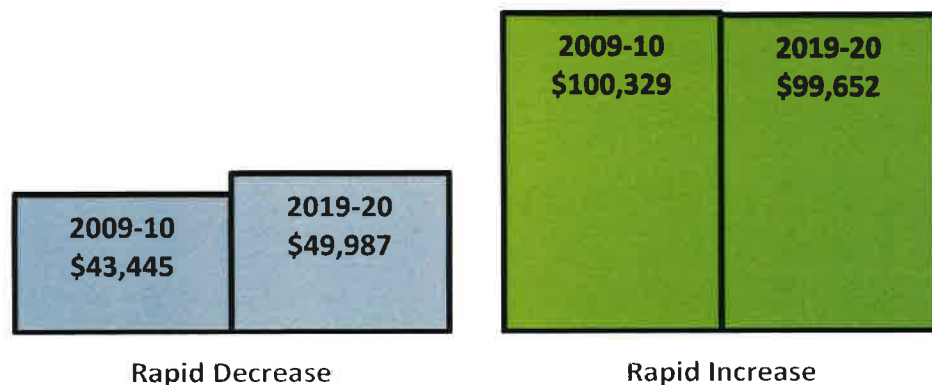
### Real Estate Taxes Per Capita



### Non-Property Taxes per Capita



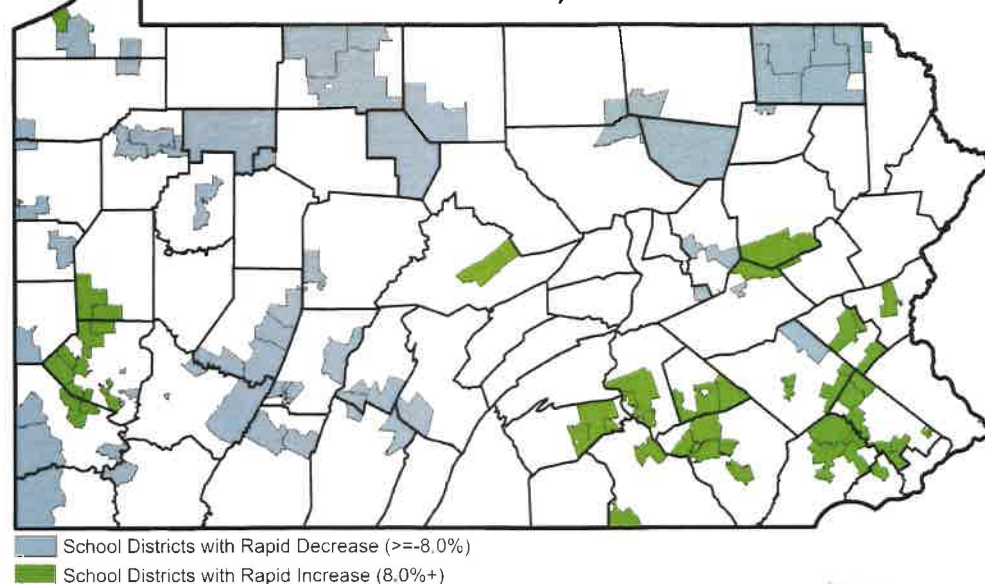
### Market Values per Capita



## Comparisons of School Districts with 8% or More Decrease and 8% or More Increase in Population, 2010 to 2020

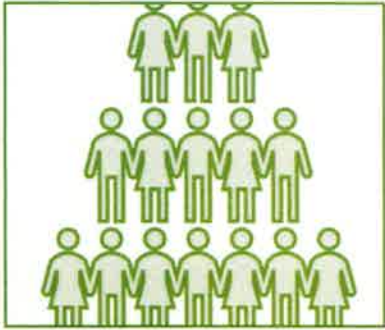
*Rapid Decline are the 51 school districts that had an 8% or more decrease in population and rapid increase are the 52 districts that had an 8% or more increase in population, 2010 to 2020. Data source: Pennsylvania Department of Education and U.S. Census Bureau. All financial data adjusted for inflation with 2020=100.*

Location of School Districts with Rapid Population Increase and Decrease, 2010 to 2020





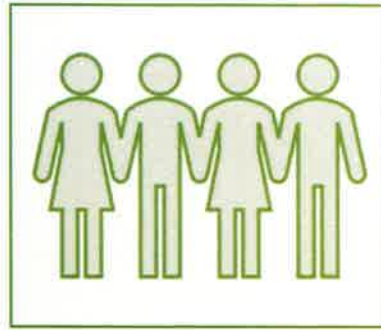
# Population Profile of School Districts with Rapid Decrease and Rapid Increase in Population, 2010 to 2020



**Avg. Population**  
Rapid Decrease = 9,114  
Rapid Increase = 37,129



**% Population 65+**  
Rapid Decrease = 21%  
Rapid Increase = 18%



**% Population of Color**  
Decrease = 13%  
Increase = 21%



**Poverty Rate Rapid**  
Decrease = 15%  
Rapid Increase = 6%



**Avg. Household Income Rapid**  
Decrease = \$67,200  
Rapid Increase = \$117,900



**Avg. Home Value**  
Rapid Decreasing = \$149,000  
Rapid Increasing = \$309,500



**% Adults Bachelor's Degree+**  
Rapid Decrease = 21%  
Rapid Increase = 43%



**Households with No Internet**  
Rapid Decrease = 17%  
Rapid Increase = 7%