

# Long-Term Enrollment Forecast

ACPS and City of Alexandria

# Long-Term Forecast

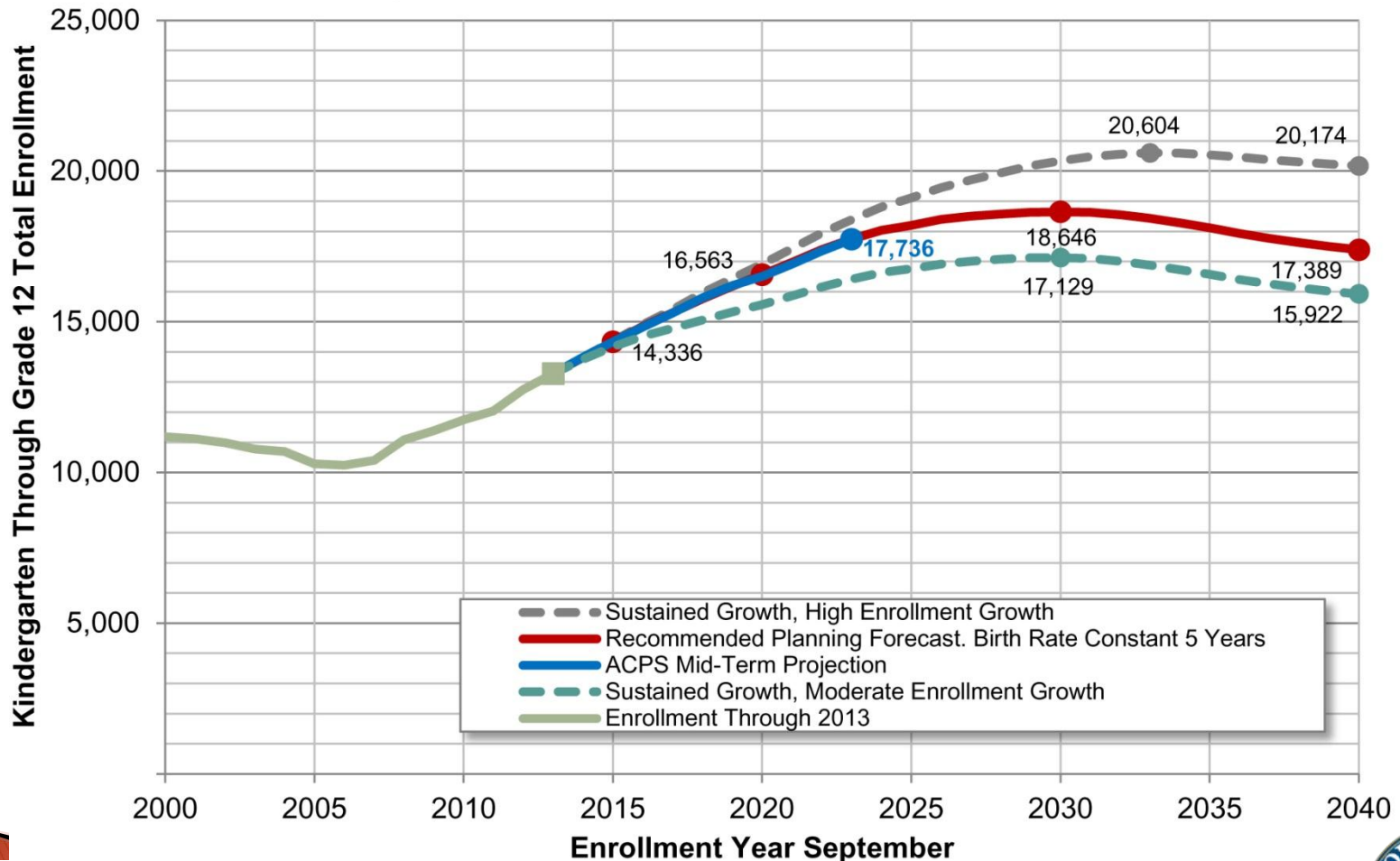
- ▶ Uses enrollment inputs forecasting model
  - Population forecast and birth rate
  - Kindergarten capture
  - Cohort survival by grade
- Reality check against
  - ACPS Mid-Term Projection
  - Student generation by residential type
  - Students per 1,000 population over time and compared to other jurisdictions

# Long-Term Forecast

- ▶ Includes a recommended forecast and alternate potential scenarios
  - Anticipate facility needs based on realistic high enrollment scenario.
  - Be aware of other possible scenarios including higher and low potential enrollment scenarios
  - Plan for flexibility in response to unknowns

# Long-Term Forecast

## Long-Term Enrollment Forecast and Alternate Scenarios



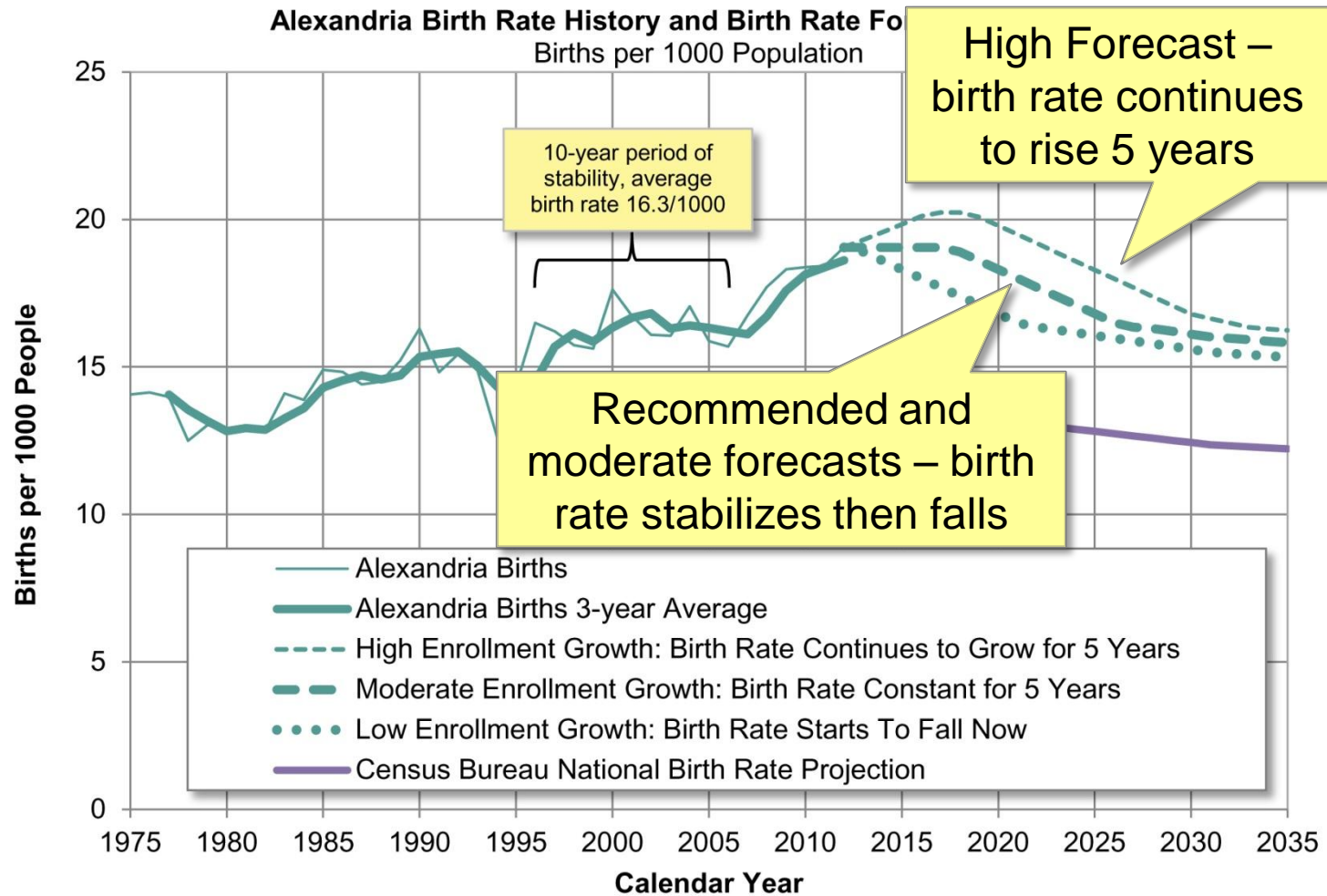
# Long-Term Forecast Scenarios

- ▶ Recommended Forecast
  - Current baby “boomlet”: births, now rising, will hold steady, then decline
  - Improved economy, limited housing modestly increases number of families moving out of Alexandria. Counterbalanced by more families seeking urban location and lifestyle.
- High enrollment forecast: births continue to increase
- Moderate enrollment forecast: outmigration increases more rapidly

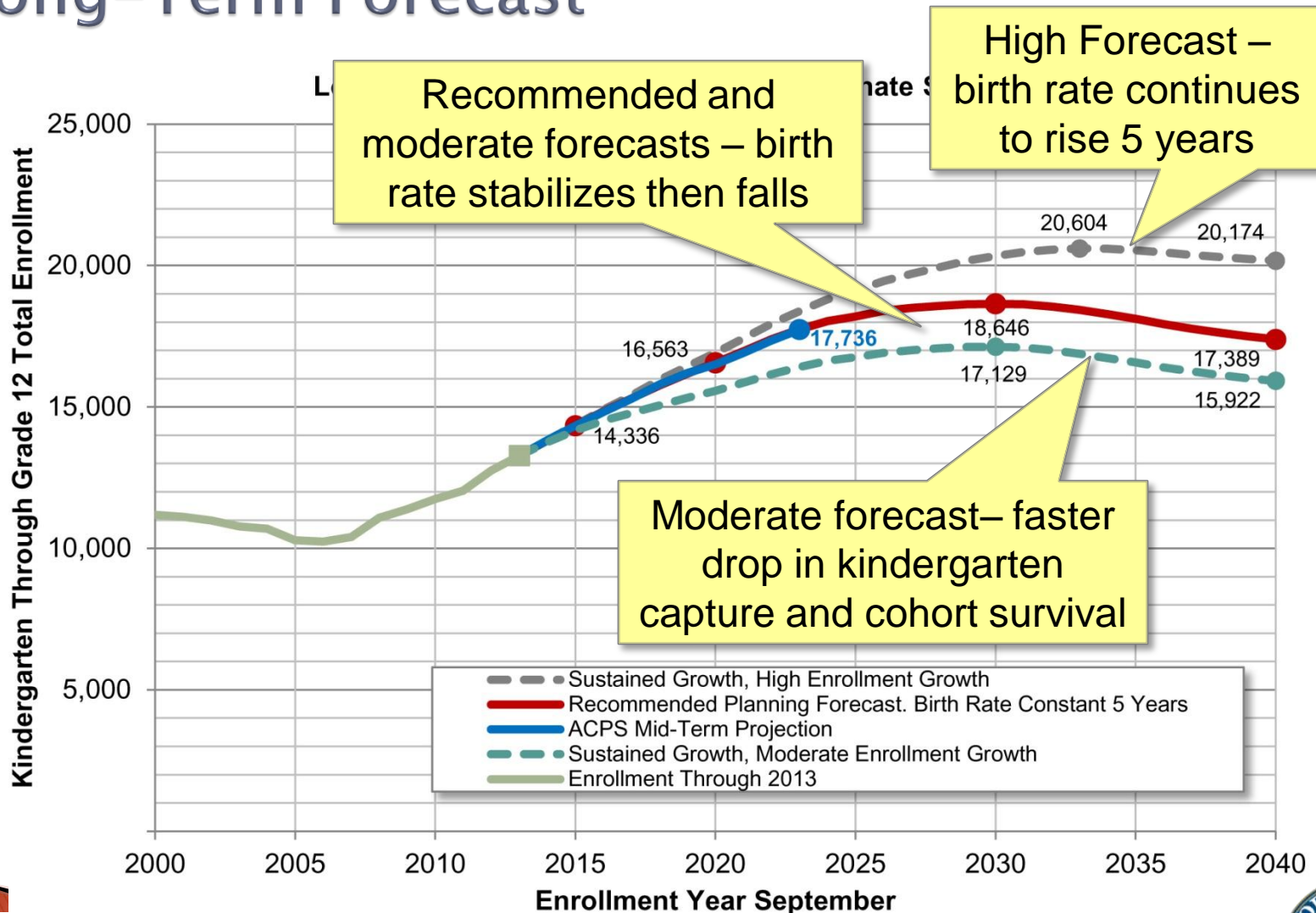
# Long-Term Forecast

| Scenario                 | Year | Birth Rate                   | K Capture                         | Cohort Survival                        |
|--------------------------|------|------------------------------|-----------------------------------|--|
| ACPS–Mid–Term Projection | 2023 | Trend in 15–year average     | 3–year average (60.7%)            | 3–year average by school by grade      |
| High Forecast            | 2040 | Increases 5 years then falls | 60% falls to 58% by 2040          | By grade, falls 1 pt to 2040           |
| Recommended Forecast     | 2040 | Steady 5 years then falls    | 60% to 58% 5 yrs then 56% by 2040 | Same                                   |
| Moderate Forecast        | 2040 | Same                         | 60% to 58% 2 yrs then 56% by 2040 | Falls 2 pts 2 years then 2 pts to 2040 |

# Birth Rate



# Long-Term Forecast





# Kindergarten Capture and Cohort Survival

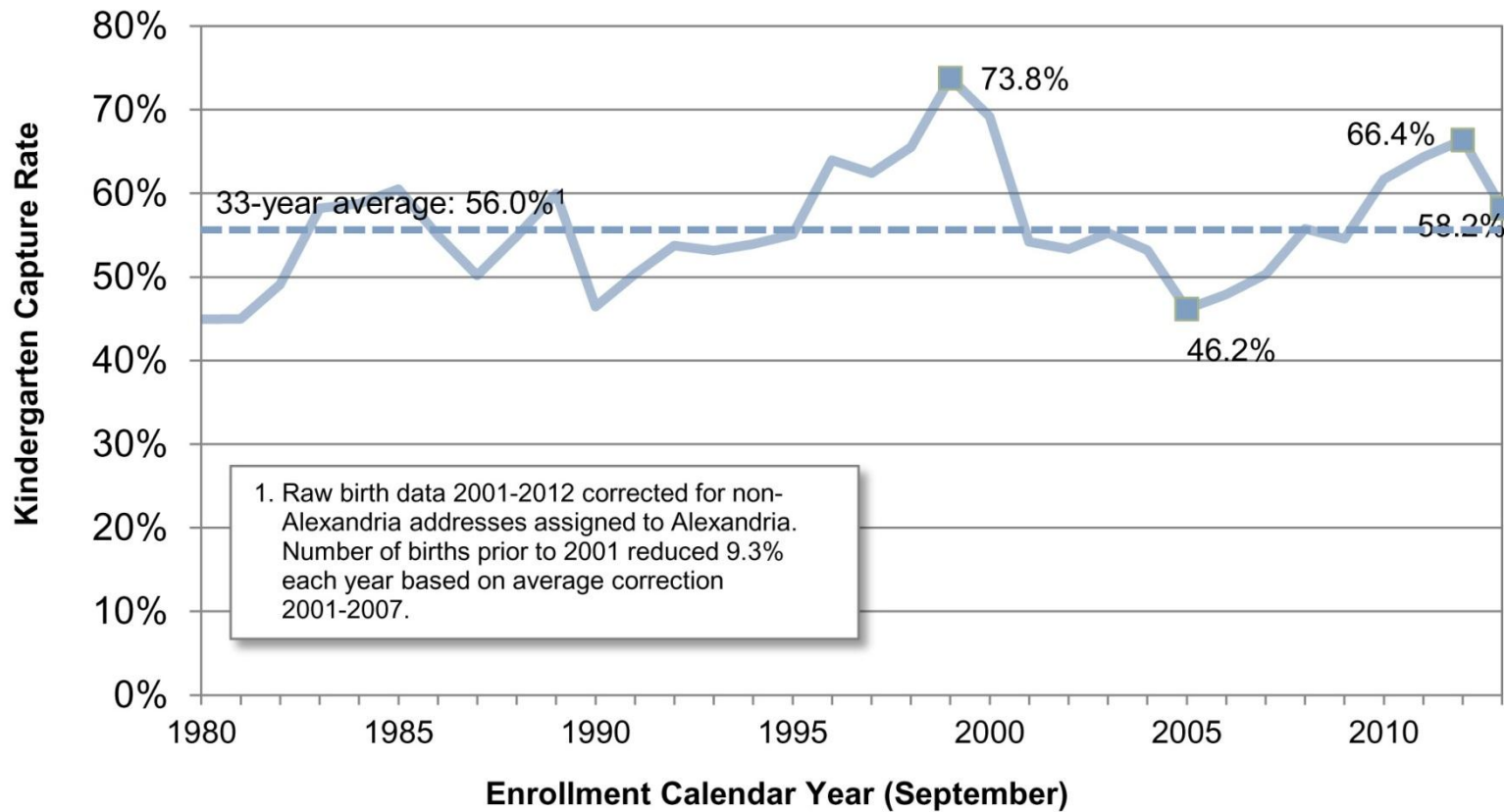
- ▶ Forces for reduction
  - Larger percentage of housing in the future will be multi-family housing.
  - Unit sizes in new multifamily units are currently low.
- Forces for increase
  - Families choosing an urban environment in which to raise their children
  - Shorter commutes/greater access to non-auto modes of travel

# Long-Term Forecast

| Scenario                            | Year | Birth Rate                   | K Capture                         | Cohort Survival                        |
|-------------------------------------|------|------------------------------|-----------------------------------|--|
| ACPS–Mid–Term Projection            | 2023 | Trend in 15–year average     | 3–year average (60.7%)            | 3–year average by school by grade      |
| High Enrollment Growth Forecast     | 2040 | Increases 5 years then falls | 60% falls to 58% by 2040          | By grade, falls 1 pt to 2040           |
| Recommended Forecast                | 2040 | Steady 5 years then falls    | 60% to 58% 5 yrs then 56% by 2040 | Same                                   |
| Moderate Enrollment Growth Forecast | 2040 | Same                         | 60% to 58% 2 yrs then 56% by 2040 | Falls 2 pts 2 years then 2 pts to 2040 |

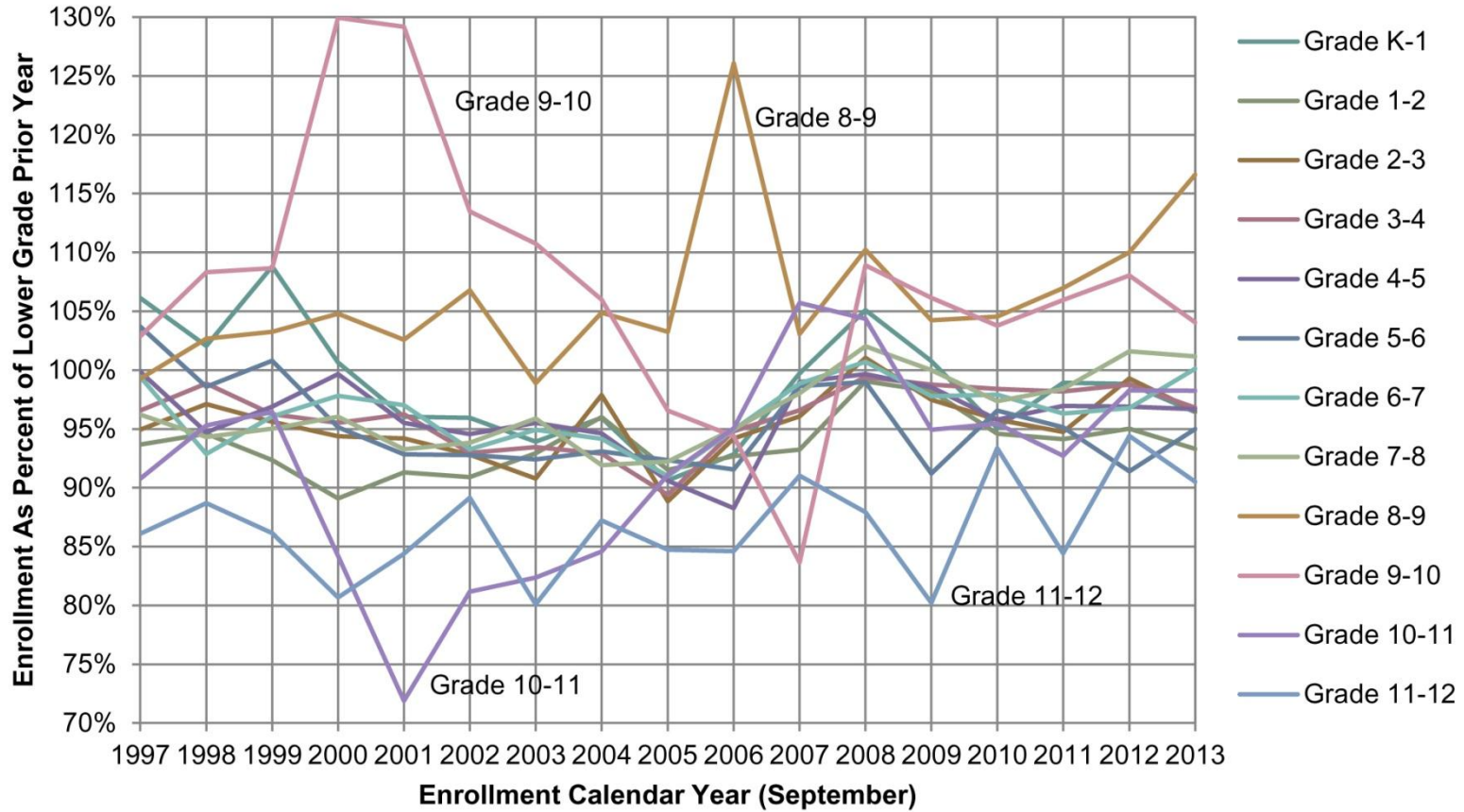
# Kindergarten Capture

**Kindergarten Capture Rate**  
Kindergarten Enrollment as Percent of Births Five Years Ago



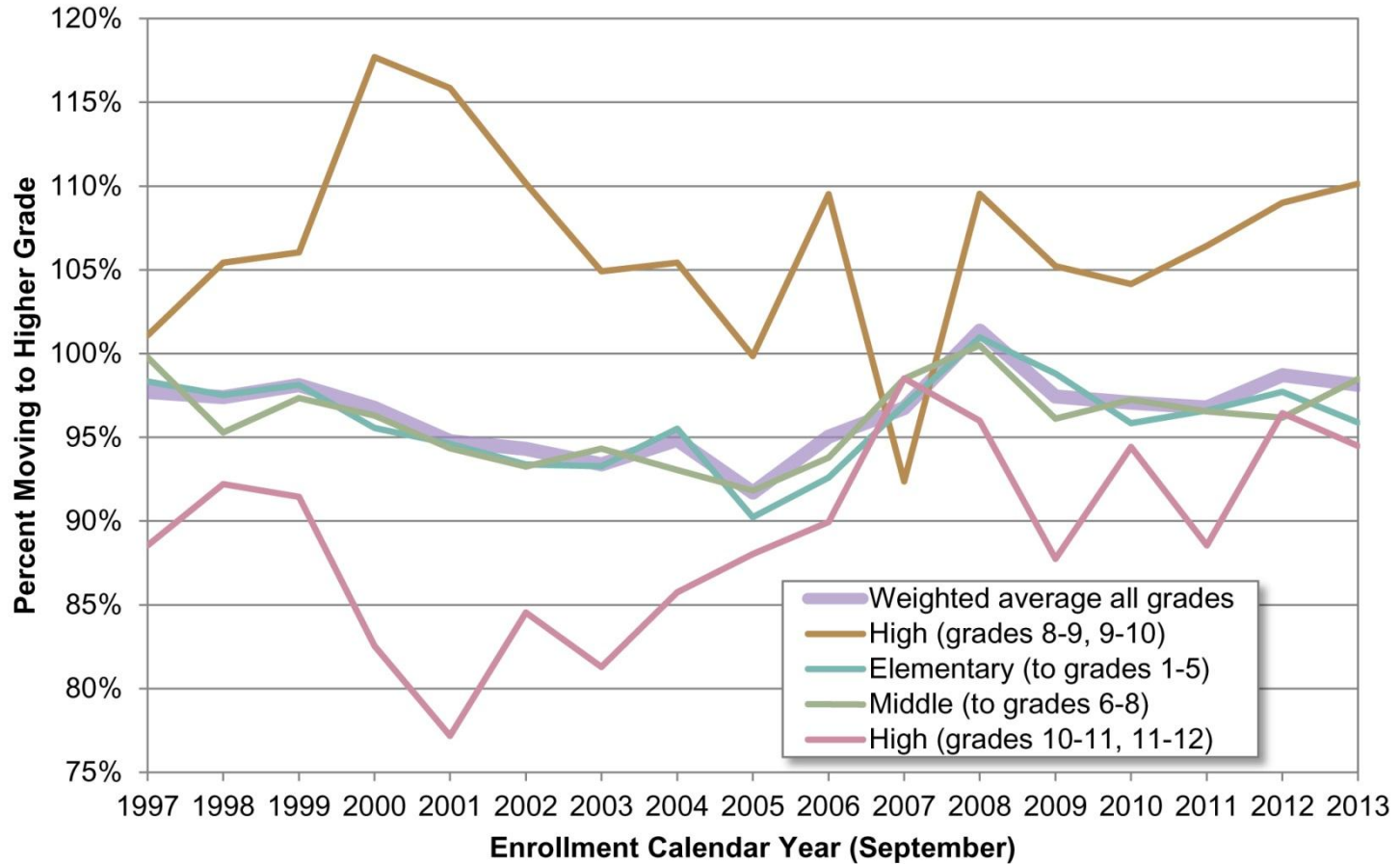
# Cohort Survival

## Grade-to-Grade Cohort Survival



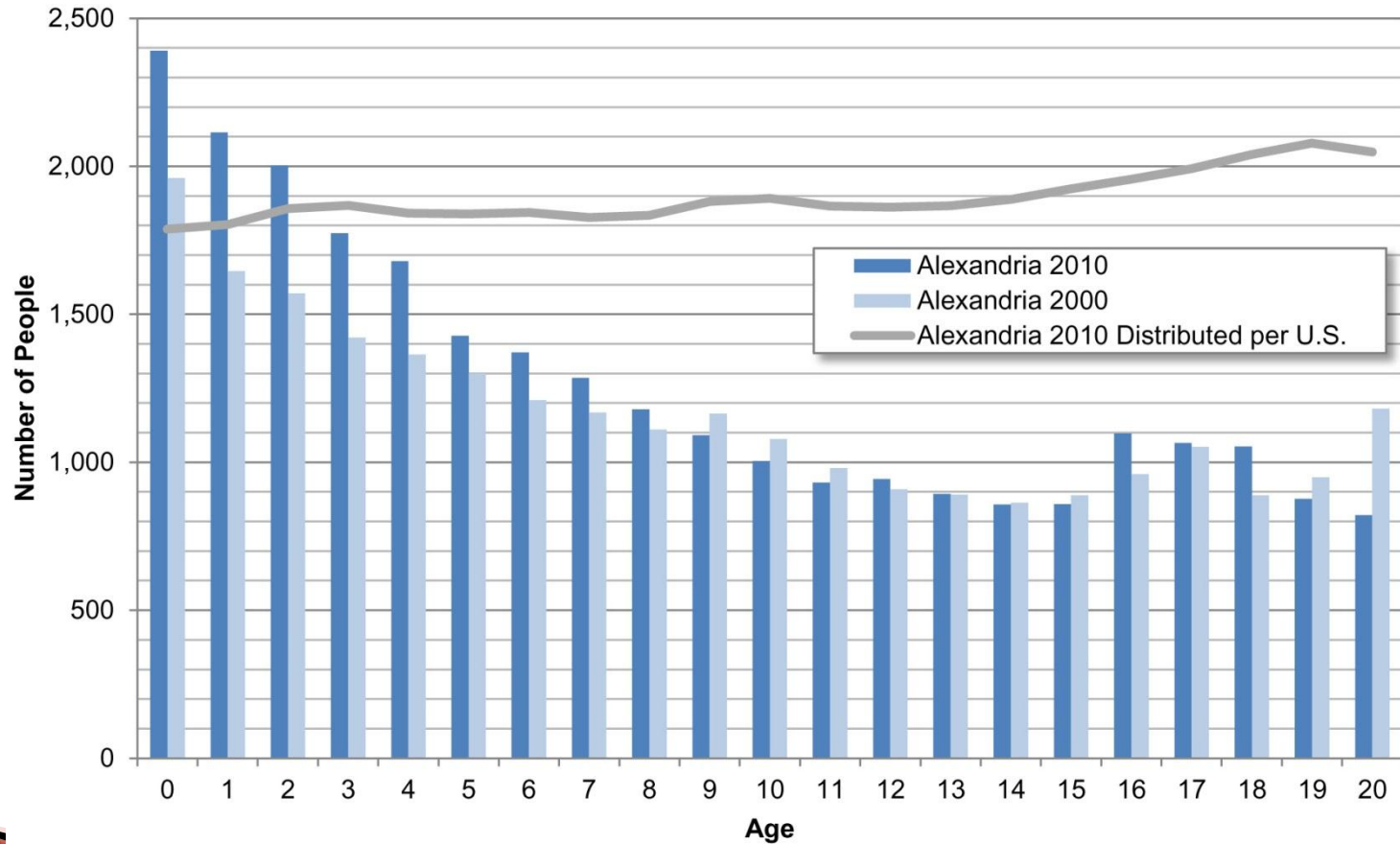
# Cohort Survival

**Cohort Survival Annual Average by School Level**  
Enrollment in Higher Grade as Percentage of Previous Year Lower Grade



# Cohort Survival

Population by Single Years of Age to Age 20  
City of Alexandria  
2000 and 2010 Census

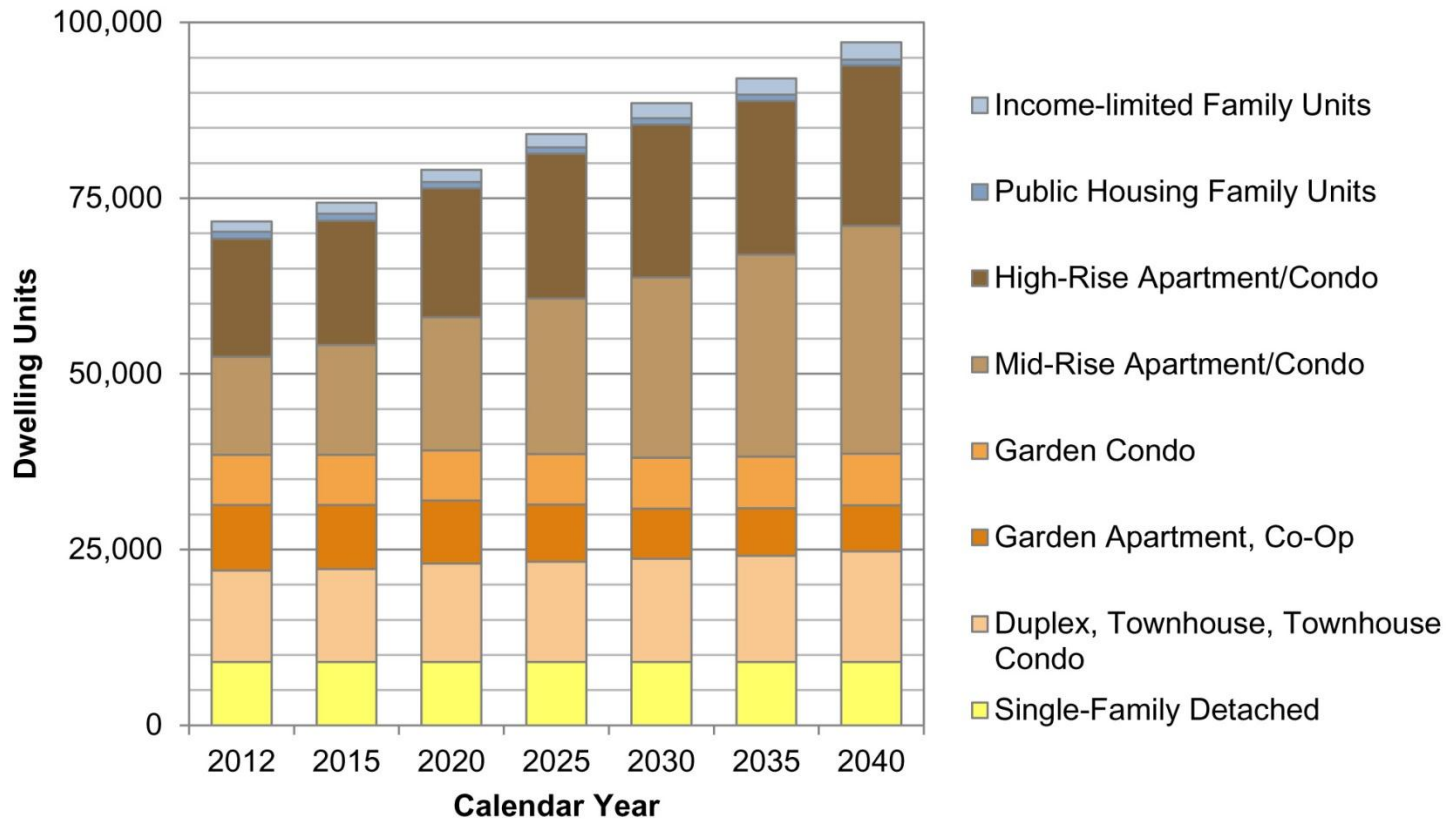


# Reality Checks – Student Generation

- ▶ Student generation rates – how much will our housing stock push back on enrollment growth?
  - What generation rates are implied by the forecast?
  - How to these compare to historic rates?
  - Are these rates reasonable given historic rates and rates in other jurisdictions?

# Reality Checks – Student Generation

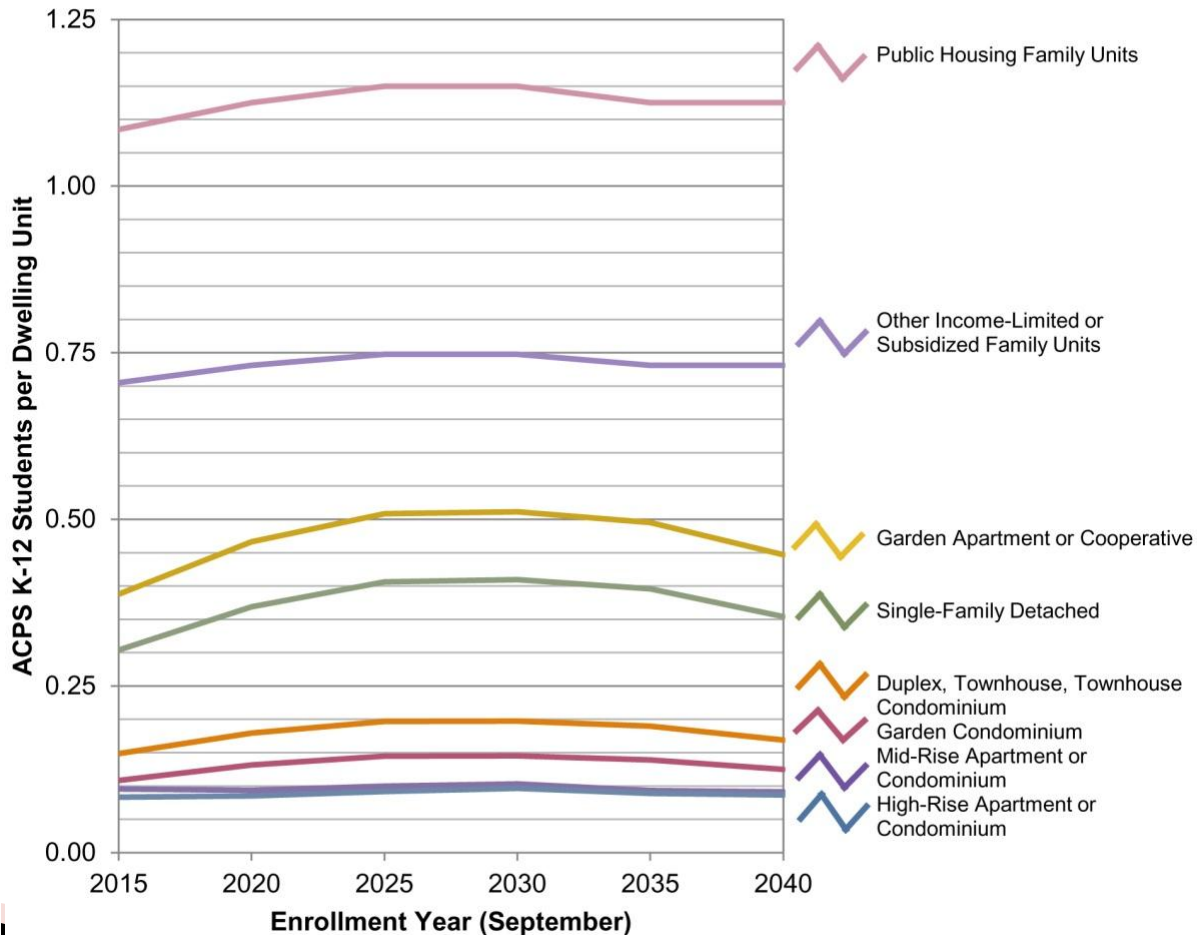
**Dwelling Units by Housing Type  
Sustained Growth Development Forecast**





# Reality Checks – Student Generation

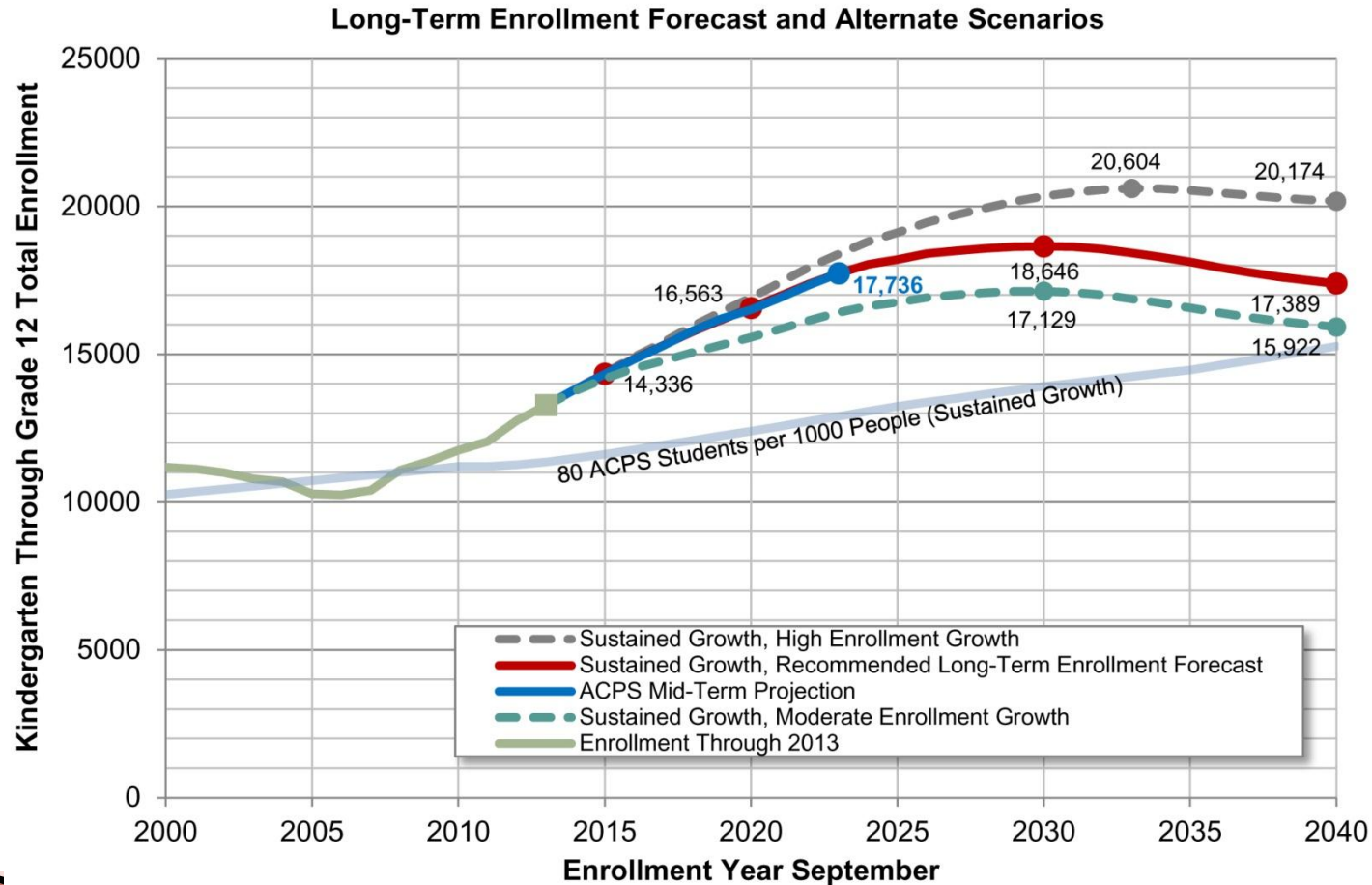
**Student Generation Rates per Dwelling Unit  
Recommended Enrollment Forecast  
Average for Existing and New Development by Housing Category**



# Reality Checks – Students per 1 000 people

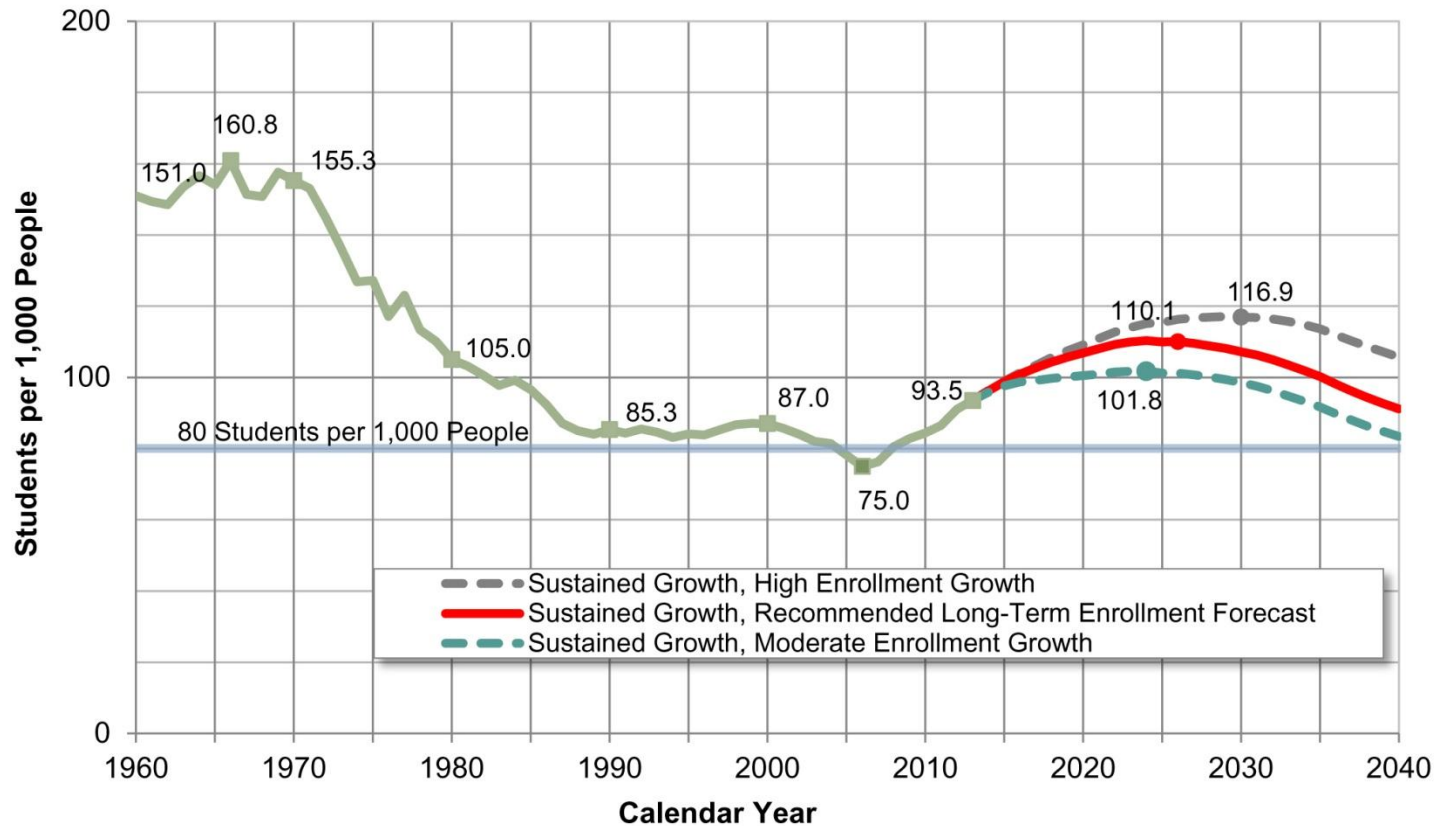
- ▶ How does the forecast change the number of students as a share of total population?
- ▶ Is this rate reasonable given Alexandria's history and the rates in comparable jurisdictions?

# Reality Checks – Students per 1 000 people



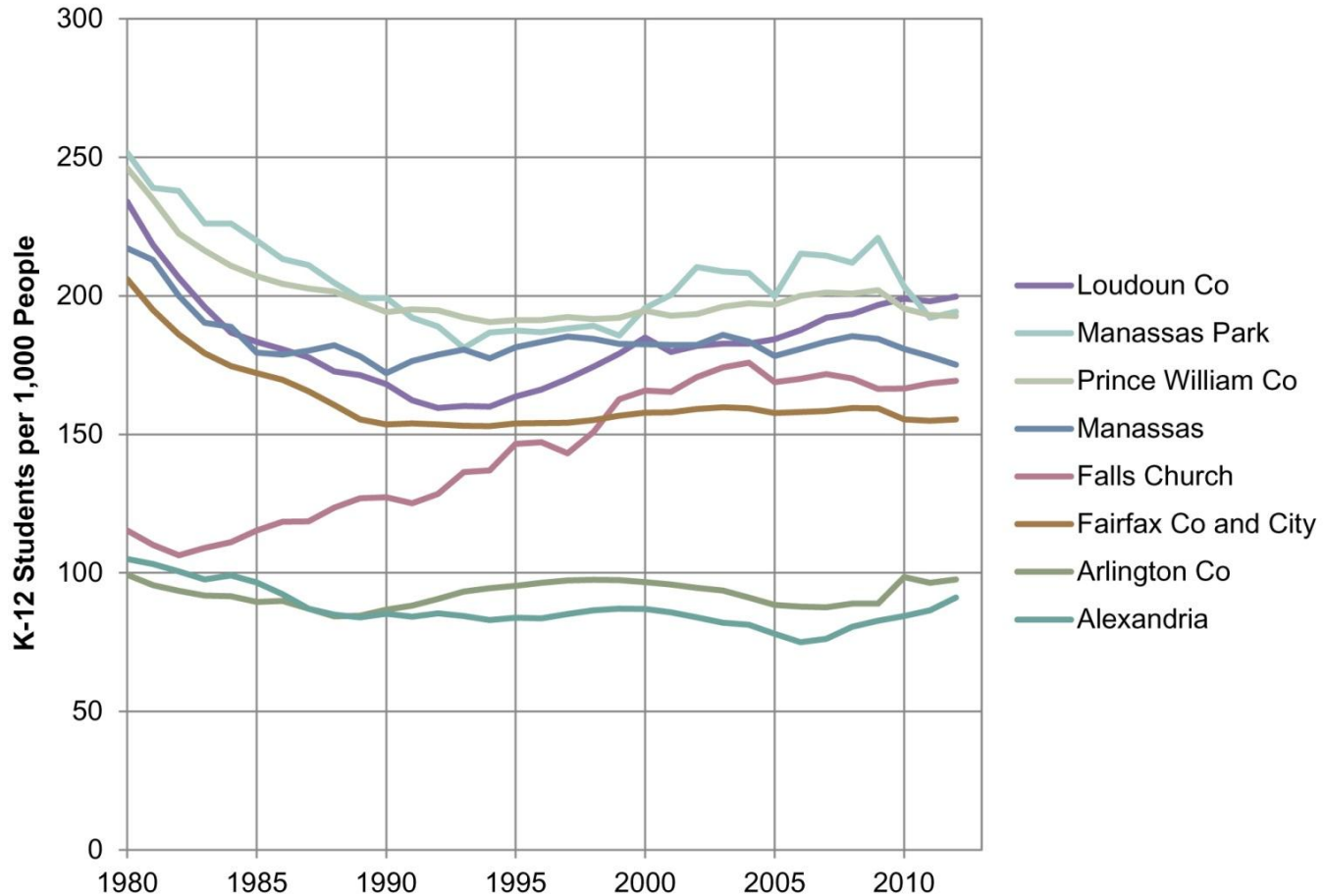
# Reality Checks – Students per 1 000 people

APCS K-12 Students Per 1,000 People Since 1960 With Forecast Scenarios



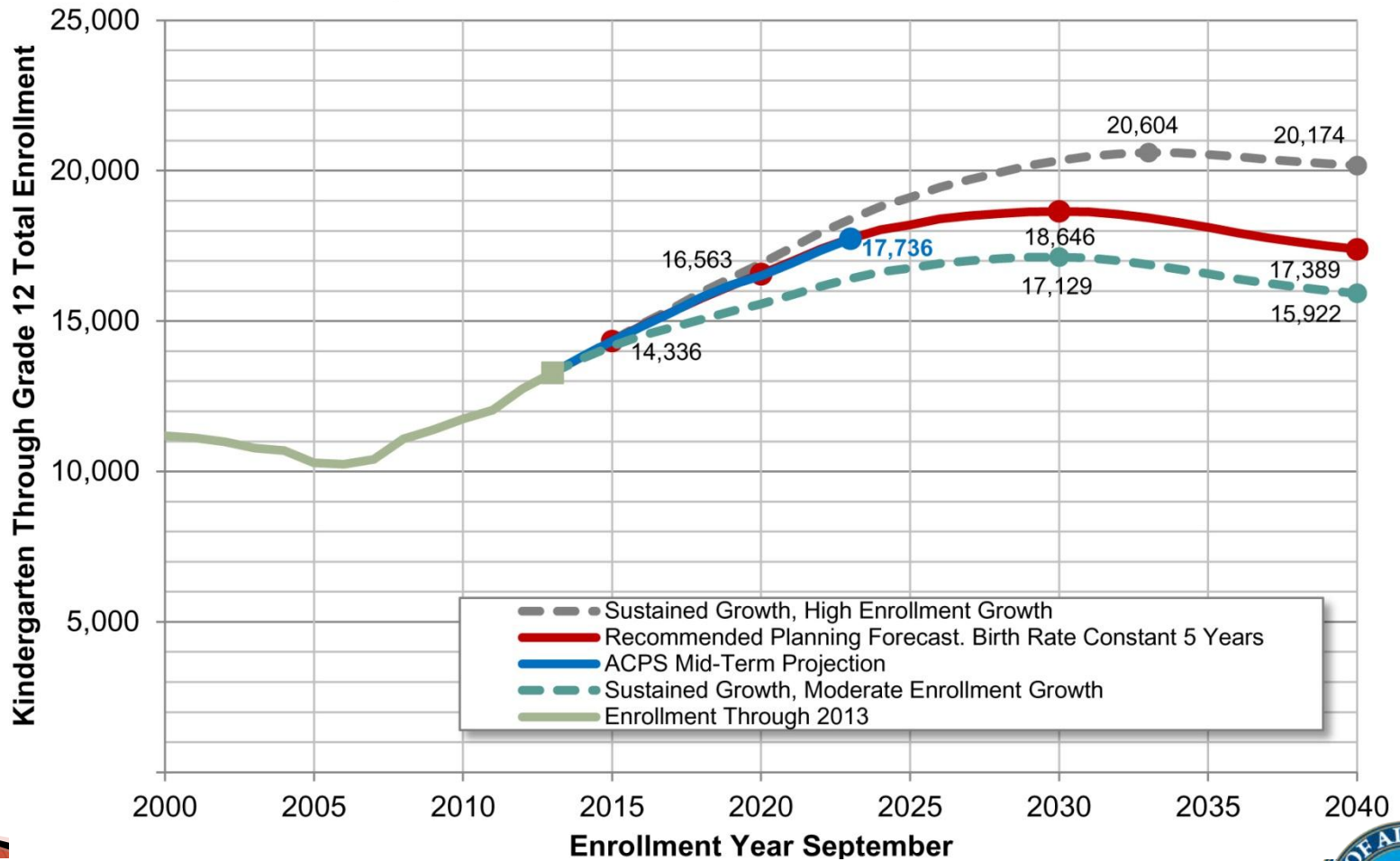
# Reality Checks – Students per 1 000 people

K-12 Students per 1,000 People for Northern Virginia Jurisdictions



# Long-Term Forecast

## Long-Term Enrollment Forecast and Alternate Scenarios



# Long-Term Forecast

- ▶ Includes a recommended forecast and alternate potential scenarios
  - Anticipate facility needs based on a realistic, relatively high enrollment scenario.
  - Be aware of other possible scenarios including higher and lower potential enrollment
  - Revise forecasts annually
  - Plan for flexibility in response to unknowns – enrollment can change without much warning, as the period since 2000 shows.

# Next Steps

- ▶ Forecasting by geography
  - Births, kindergarten capture and cohort survival
  - Track students for cohort survival through the grades
- ▶ Complete student generation review for 2013, go back in time to identify ranges and trends from specific projects where census data fits projects.
- ▶ Update long-term forecast with 2013 birth data.
- ▶ Prepare a long-term forecast to accompany FY 2015 enrollment projections.



Comments?  
Questions?