Preliminary Enrollment Projection Highlights

Equity 2020 Advisory Committee
June 2016
Agenda

• Equity 2020 Purpose and Expectations
• Enrollment Analysis and Projections
• Decision-Making Criteria
• Public Outreach
• Next Steps
Equity 2020 Advisory Committee

• Charge of the Committee
• Expectations
Enrollment Analysis and Projections

• Demographics, housing and enrollment analysis
• Projections methodology
• Enrollment projections
Population Trends

- Long term decline in City of Hartford’s resident population contrasts against growth of County-wide and Sheff region’s population

- Most recent Census estimates (2014) show a stabilized population

- Projections show slow growth in coming years (+3% by 2040) in context of faster regional growth (11-14%)
Population Trends

Hartford Demographic Changes, 2000-2014

<table>
<thead>
<tr>
<th>Demographic Category</th>
<th>2000</th>
<th>2010</th>
<th>2014</th>
<th># Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>124,121</td>
<td>124,775</td>
<td>125,211</td>
<td>1,090</td>
<td>0.88%</td>
</tr>
<tr>
<td>Households</td>
<td>44,986</td>
<td>45,124</td>
<td>45,801</td>
<td>815</td>
<td>1.81%</td>
</tr>
<tr>
<td>Average Household Size</td>
<td>2.58</td>
<td>2.57</td>
<td>2.55</td>
<td>-0.03</td>
<td>-1.16%</td>
</tr>
<tr>
<td>White Non-Hispanic</td>
<td>17.8%</td>
<td>15.8%</td>
<td>15.9%</td>
<td>-0.02</td>
<td>-10.67%</td>
</tr>
<tr>
<td>Black Non-Hispanic</td>
<td>36.1%</td>
<td>35.4%</td>
<td>35.1%</td>
<td>-0.01</td>
<td>-2.77%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>40.5%</td>
<td>43.4%</td>
<td>43.6%</td>
<td>0.03</td>
<td>7.65%</td>
</tr>
<tr>
<td>School Age Population</td>
<td>28,696</td>
<td>25,378</td>
<td>23,407</td>
<td>-5,289</td>
<td>-18.43%</td>
</tr>
<tr>
<td>Women Age 15-34</td>
<td>20,521</td>
<td>22,543</td>
<td>22,761</td>
<td>2,240</td>
<td>10.92%</td>
</tr>
<tr>
<td>Families with Own Children</td>
<td>15,481</td>
<td>14,021</td>
<td>14,121</td>
<td>-1,360</td>
<td>-8.78%</td>
</tr>
<tr>
<td>Housing Units</td>
<td>50,644</td>
<td>51,822</td>
<td>53,644</td>
<td>3,000</td>
<td>5.92%</td>
</tr>
<tr>
<td>Owner-Occupied</td>
<td>24.6%</td>
<td>24.4%</td>
<td>23.5%</td>
<td>-0.01</td>
<td>-4.47%</td>
</tr>
<tr>
<td>Renter-Occupied</td>
<td>75.4%</td>
<td>75.6%</td>
<td>76.5%</td>
<td>0.01</td>
<td>1.46%</td>
</tr>
<tr>
<td>Vacant Units</td>
<td>11.2%</td>
<td>12.9%</td>
<td>14.6%</td>
<td>0.03</td>
<td>30.36%</td>
</tr>
</tbody>
</table>

Source: 2010 U.S. Census and 2014 American Community Survey

- Major trends continuing:
  - Shrinking household sizes
  - Stable racial/ethnic split
  - Declining school-age population
  - Increase in women of child-bearing age (but without corresponding increase in births)
  - Number of families with children may be stabilizing
Population

- Highest density in the South End, Barry Square, Frog Hollow, Asylum Hill, and Upper Albany neighborhoods
School-Age Population

• Largest school-age populations reside in the South End/Southwest, Frog Hollow, Blue Hills, and Northeast
Females of Child-Bearing Age

- Distribution of the population of potential mothers (females between 15 and 44) predictive of future births and school attendance

- Largely concentrated in the same neighborhoods as children: South End, Barry Square, West End, Blue Hills
Hartford Housing Trends

- Local sales have seen slow, limited recovery
- Condo sales playing a more limited role than during height of market
- Price trend has remained negative post-Recession

Source: The Warren Group, 2016
Home foreclosures have played a major role in low shares of owner-occupied homes in Hartford, although rate is dropping.

76.5% of Hartford residents rent rather than own, and over half pay >35% of income towards rents, indicating cost burden of unaffordable housing.

Foreclosures, low owner-occupancy, and high rents relative to income are mutually reinforcing and contribute to less residential stability.
Housing Trends

- Residential building saw brief recovery through 2010, but reversed course in last several years

- Recent applications have potential for nearly 1,000 new units; however, style and price points suggest modest student generation

**Potential Enrollment Impacts of New Development**

<table>
<thead>
<tr>
<th>Project</th>
<th>Units</th>
<th>Potential Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>DoNo Hartford Projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Townhomes</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>Condos/Apartments</td>
<td>734</td>
<td>33</td>
</tr>
<tr>
<td>89 Webster St</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Townhomes</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>150 Windsor St</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apartments</td>
<td>96</td>
<td>12</td>
</tr>
<tr>
<td>370 Asylum St</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apartments</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>421 Granby St</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRD (Rental)</td>
<td>74</td>
<td>13</td>
</tr>
</tbody>
</table>

Based on Rutgers Residential Demographic Multipliers, 2007
Regional Housing Trends

- Neighboring communities saw smaller drop-offs during the Recession but have followed similar recovery trends.
- West Hartford a major regional sales driver.
Births

- Region on long-term declining trend, down about 20% from 1996
  - Historically, Hartford births make up ~30%
- Hartford on higher trajectory than the region up to 2009, abrupt downturn began in 2010 and is only beginning to affect enrollment
  - Cumulative decline of 15% since 2009
Births

Hartford Annual Births: Historic and Estimated, 1996-2020

- Seen in greater detail, Hartford’s birth trend shows a drastic change in 2010 from prevailing levels seen from 1999 to 2009.

- Future birth estimates based on a moving average; regression models based on employment and housing indicators have not yielded a good fit.
Fertility Rates

• Ongoing declines in fertility are a nationwide phenomenon, especially post-2007, but have been most dramatic among non-White women

• Teen birthrates are down sharply, especially among Hispanic and black women

• Less sharp but similar trend seen in women ages 20-29
Fertility Rates

- Hartford appears to be following a similar trend to national averages, as well as comparable Connecticut cities.
  - Birthrate dropped for women between 15 and 29, while older age groups had modest increases in birth rates.
    - Teen birthrates dropped by more than a third.

- Hartford’s population is younger than peer cities and the region, magnifying the impact of fertility rate changes.
Births

- Projected births assume continuation of current trend in Hartford and across the region
Zones

- Hartford’s four school attendance zones provide a useful level of analysis for understanding birth trends across the City
  
  - **Zone 1**: Northwest
  - **Zone 2**: Northeast
  - **Zone 3**: Southwest
  - **Zone 4**: Southeast
Zone 1

- Achievement First (K-8 and 9-12)
- Annie Fisher (STEM & Montessori) (PK-8)
- Breakthrough II Magnet (PK-8)
- Classical Magnet (6-12)
- Culinary Arts @ Weaver (9-12)
- Martin Luther King Jr. (PK-8)
- Rawson School (PK-8)
- University Science & Engineering (9-12)
- Webster MicroSociety (PK-8)
- West Middle (K-8)
Zone 2

- Achievement First Summit (5-8)
- Capital CC Magnet (11-12)
- Capital Prep. Magnet (PK-12)
- Clark (PK-8)
- Global Communications (K-12)
- Hartford Pre-K Magnet (PK)
- Journalism & Media (9-12)
- Milner (PK-8)
- SAND (K-8)
- Simpson-Waverly (PK-8)
- Wish Museum School (PK-8)
Zone 3

- Batchelder School (PK-8)
- Breakthrough Magnet (PK-8)
- Burns Latino Studies Academy (PK-8)
- Environmental Sciences @ Hooker (PK-8)
- Expeditionary/Montessori @ Moylan (PK-8)
- HPHS Engineering & Green Tech (9-12)
- HPHS Law & Government (9-12)
- HPHS Nursing Academy (9-12)
- Kennelly School (PK-8)
- McDonough Expeditionary Learning (6-8)
- Parkville School (PK-5)
- Sanchez School (PK-5)
Zone 4

- Asian Studies @ Bellizzi (PK-8)
- Betances ERL (PK-3)
- Bulkeley High (9-12)
- Burr School (PK-8)
- Hartford Magnet Trinity (HMTCA) (6-12)
- High School Inc. (9-12)
- Kinsella - Performing Arts (PK-12)
- M.D. Fox School (PK-8)
- Naylor School (PK-8)
- OPPortunity Academy (9-12)
- Renzulli GAT Academy (4-8)
- Sport & Medical Sciences (6-12)
- STEM Magnet @ Dwight (4-8)
Births by Zone

- Births in Zones 1, 3, and 4 have followed a downward trend
- Zone 2 has fluctuated within relatively narrow range since falling from a peak period between 2006-2009

Change in Annual Births Since 2005

<table>
<thead>
<tr>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
<th>Zone 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>-21%</td>
<td>+1%</td>
<td>-18%</td>
<td>-14%</td>
</tr>
</tbody>
</table>
Enrollment History: Region

- Global view: steadily declining regional enrollments with fluctuating but downward-trending Hartford Public Schools enrollments

- Sheff region (non-Hartford) public school enrollments fell 9.5% between 2005-06 and 2014-15

Enrollment History: HPS

- Breaking down HPS enrollment between Hartford residents and regional students reveals opposite trends

- Resident enrollment down by over 4,300 students since 2006-07

- Regional enrollment has more than tripled in the same period
Enrollment History: Hartford Students in Other Schools

- Almost a third of Hartford resident students attend a school outside HPS
- The majority, about 7,000 in total, attend other public schools (magnet, open choice, technical high school, voag, etc.)
- About 1,000 additional students attend private schools in the region
Examining by-grade resident enrollment across the system shows steady attrition as cohorts advance through grades:

- By 8th grade, only 61% of entering K remain in HPS in past two years.
- Growth in Pre-K attendance and lower drop-out rates entering 12th moderate the trend slightly.
Enrollment History: Regional Students in HPS

- Non-resident student enrollment in HPS through open choice brought in 4,526 students in 2015-16

- Formerly concentrated in grades 6-12, but regional enrollment has grown substantially in Pre-K and elementary grades
Enrollment History: Hartford Students in HPS by Zone

- Most recent five years of resident enrollment analyzed by **zone of residence** (not necessarily the same as the zone of the school attended)
  - Zone 1 (Northwest) is down 17% from 2011-12
  - Zone 2 (Northeast), with rebound in 2015-16, down 1%
  - Zone 3 (Southwest) down 11%
  - Zone 4 (Southeast) down 5%
Enrollment History: Migration In/Out of HPS

- Net movement in and out of district aligns with expected trends:
  - Large movement at 5\textsuperscript{th}/6\textsuperscript{th} and 8\textsuperscript{th}/9\textsuperscript{th} transitions, with net gain at middle school transition and significant net loss at high school transition.

<table>
<thead>
<tr>
<th>Grade</th>
<th>12-13</th>
<th>13-14</th>
<th>14-15</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>KF</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1</td>
<td>66</td>
<td>12</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>25</td>
<td>0</td>
<td>-7</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>64</td>
<td>-21</td>
<td>-44</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>-174</td>
<td>-94</td>
<td>-133</td>
<td>-100</td>
</tr>
<tr>
<td>6</td>
<td>234</td>
<td>165</td>
<td>208</td>
<td>152</td>
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<tr>
<td>7</td>
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<td>8</td>
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<td>9</td>
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<tr>
<td>10</td>
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<tr>
<td>11</td>
<td>-67</td>
<td>-115</td>
<td>-82</td>
<td>-66</td>
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<tr>
<td>12</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Enrollment History: Migration In/Out of HPS

- Year-to-year changes in enrollment from grades 1-4 to grades 2-5 provide a good estimate of migration in most stable grade cohorts.

- All zones have seen net movement out of these grades, with average migration in Zone 1 higher than other zones.

<table>
<thead>
<tr>
<th>Zone</th>
<th>Year</th>
<th>Elementary Migration Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2012-13</td>
<td>-13.6%</td>
</tr>
<tr>
<td></td>
<td>2013-14</td>
<td>-8.6%</td>
</tr>
<tr>
<td></td>
<td>2014-15</td>
<td>-9.5%</td>
</tr>
<tr>
<td></td>
<td>2015-16</td>
<td>-5.6%</td>
</tr>
<tr>
<td>Avg.</td>
<td></td>
<td>-9.4%</td>
</tr>
<tr>
<td>2</td>
<td>2012-13</td>
<td>-4.8%</td>
</tr>
<tr>
<td></td>
<td>2013-14</td>
<td>-5.5%</td>
</tr>
<tr>
<td></td>
<td>2014-15</td>
<td>-5.5%</td>
</tr>
<tr>
<td></td>
<td>2015-16</td>
<td>-3.8%</td>
</tr>
<tr>
<td>Avg.</td>
<td></td>
<td>-4.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>Year</th>
<th>Elementary Migration Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2012-13</td>
<td>-8.8%</td>
</tr>
<tr>
<td></td>
<td>2013-14</td>
<td>-2.2%</td>
</tr>
<tr>
<td></td>
<td>2014-15</td>
<td>-4.1%</td>
</tr>
<tr>
<td></td>
<td>2015-16</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Avg.</td>
<td></td>
<td>-3.8%</td>
</tr>
<tr>
<td>4</td>
<td>2012-13</td>
<td>-6.0%</td>
</tr>
<tr>
<td></td>
<td>2013-14</td>
<td>-5.8%</td>
</tr>
<tr>
<td></td>
<td>2014-15</td>
<td>-4.8%</td>
</tr>
<tr>
<td></td>
<td>2015-16</td>
<td>-5.5%</td>
</tr>
<tr>
<td>Avg.</td>
<td></td>
<td>-5.5%</td>
</tr>
</tbody>
</table>
Projection Methodology

- Projections built using cohort-survival methodology, which relies on observed data from the recent past in order to project the near future

- Cohort Survival Ratios (CSRs) account for the various external factors affecting enrollments: housing characteristics, economic conditions, student transfers in and out of system, and student mobility

- Preliminary projections based on 3-year weighted average CSRs and 5-year moving average births
Projection Methodology

• Hierarchical normalization allows for detailed projections of sub-groups (such as zones and individual schools) with global projection acting as a constraint

• Projected total Hartford resident students and total HPS students provide ‘check’ on more detailed models:
  
  • Projected Hartford residents in HPS, other public, private
  • Projected HPS enrollment by zone
  • Projected HPS enrollment by individual school (in progress)
The City of Hartford’s resident K-12 student population is projected to fall by 16.9% over the coming decade, with HPS and private school enrollments driving the decline.

Uncertainty on future trajectory of non-HPS public enrollments—projections show a conservative path.
• HPS K-12 enrollments are projected to decline by 17.4% over the ten-year projection horizon.

• Following recent trend, scenario shows 24.5% decline in resident students, moderated by 7.4% increase in regional student enrollment.
Projections – Sheff Region

- Assumes static Sheff Region composed of current 25 towns—not historically realistic
- Net migration into and out of the region is low and recently has been a net positive—decline driven by births
- Enrollment projected to decline by 9.4% over ten year horizon
Projections – Hartford Residents in HPS by Zone

- Projected resident K-12 students attending HPS by zone of residence
- Significant enrollment declines projected for all zones (18-28%)
Projections – Hartford Residents in HPS

- Most severe declines of ~28% projected for Zone 1 and Zone 4 (Northwest and Southeast).
- In line with recent history, Zone 2 (Northeast) is projected to experience significantly slower rate of decline (18%).
- Zone 3 (Southwest) is projected to fall at roughly the District-wide average, declining by a total of 25%.
Projections: Overall Trends

- Enrollments are projected to decrease across the district at the five years (-9.6% by 2020-21) and ten year (-17.4% by 2025-26) horizons.

- Regional student enrollment is not projected to grow dramatically, but with steady decrease in resident students, will make up more than a quarter of HPS enrollment as soon as 2020-21.

- Zone 2 schools are expected to remain the most stable while Zones 1 and 4 experience the sharpest rate of decline; however, each zone contains schools projected to experience enrollment declines of 25% or more.
Criteria for Decision-Making

- What factors should drive alternatives and decisions? What are we trying to improve/enhance? What do we want to protect?

- How will the Committee make decisions?

D.C. Schools Original Criteria
- All schools can offer robust programming;
- Our portfolio of schools will be flexible and ready to respond to population growth and shifts with a mix of strong neighborhood schools and out-of-boundary options; and
- Our school district will be financially stable and able to direct funds to our highest priorities.

D.C. Schools Additional Criteria Following Public Input
- Equity and quality programming;
- Cost savings;
- Safety and walkability;
- Facility planning and impact of charter schools; and
- Transitions of students to new schools.

Source: Better Schools for All Students: DCPS' Consolidation and Reorganization Plan

CRITERIA FOR IDENTIFYING SCHOOLS ELIGIBLE FOR CLOSURE IN PHILADELPHIA

- Educational adequacy
- Academic performance
- Enrollment/population decline
- Percentage of students from outside boundary
- Academic program alignment/equity
- Neighborhood impact
- Sharing staff/resources
- Building condition
- Utilization
- Neighboring schools
- Potential to reduce excess space
- Feeder pattern alignment
- Reuse options

Additional Examples of Criteria for Similar Planning Studies

Objectives

◊ Provide sufficient capacity in the PreK-8 system to address districtwide space shortage
◊ Alleviate overcrowding at PreK-5, Prek-8 and 6-8 schools with greatest need for the foreseeable future
◊ Attain Waterbury PreK-8 neighborhood school model
◊ Provide appropriate space at facilities strategically located for growing PreK, Bilingual and ELL, SPED, BDLC needs

Redistricting Criteria

The redistricting process will improve education for all students by:

1. Increasing enrollment balance: racial, socioeconomic, and deployment of resources
2. Minimizing negative impacts to students and families
3. Maintaining grant funding and minimizing additional costs to the District
4. Ensuring the long-term sustainability of the plan
5. Striving for student and family proximity to assigned schools and building strong school communities
6. Maintaining flexibility for future programming opportunities
Outreach Strategy

• What groups do we need to reach in order to conduct a transparent planning process with community input? Which groups are you best positioned to engage in the process?

• How do we make a full range of background information and analysis available to parents and other stakeholders?

• What is the message of the Committee?

• How will public input be incorporated into your deliberations and process?
Next Steps

• July 21st Meeting
  • Review facilities utilization and capital improvement needs
  • Brainstorm alternatives
• August/ September Meetings – Alternatives Analyses
• October - Recommendations