

# **Impact Analysis of New Attendance Zones**

August 2014

Office of the Deputy Mayor for Education  
with technical assistance by the 21<sup>st</sup> Century School Fund and  
the Urban Institute

# Purpose

- The Office of the Deputy Mayor for Education, with technical assistance by the 21<sup>st</sup> Century School Fund and the Urban Institute, analyzed the impact of the new attendance zone boundaries and geographic feeder patterns on all current public school students (i.e., students enrolled in DCPS or public charter schools in SY2013-14).
- This analysis focuses on how public school students' school assignment rights would be impacted if the new attendance zone boundaries were to be implemented today, regardless of whether a student is enrolled in their zoned DCPS school, without taking into account the phase-in policies. (Future analysis will incorporate phase-in policies in the implementation plan.)
  - As of SY2013-14, of all public school students, 44% are enrolled in public charters, 28% are enrolled in their in-boundary DCPS school, 21% are enrolled in an out-of-boundary DCPS school, 4% are enrolled in a DCPS selective school, and 3% are enrolled in a DCPS special education, adult, or alternative school.
  - See [dme.dc.gov/boundaries](http://dme.dc.gov/boundaries) for more information about the phase in policies.
- Most of the analysis focuses on “affected students”, meaning students who have:
  - Been reassigned to a different school from the one they currently have a right to.
  - Gone from having multiple rights to having only one school of right. See [Schools of Right](#) on the DME’s school assignment data sheet page for more information.

# Data Sources and Methodology

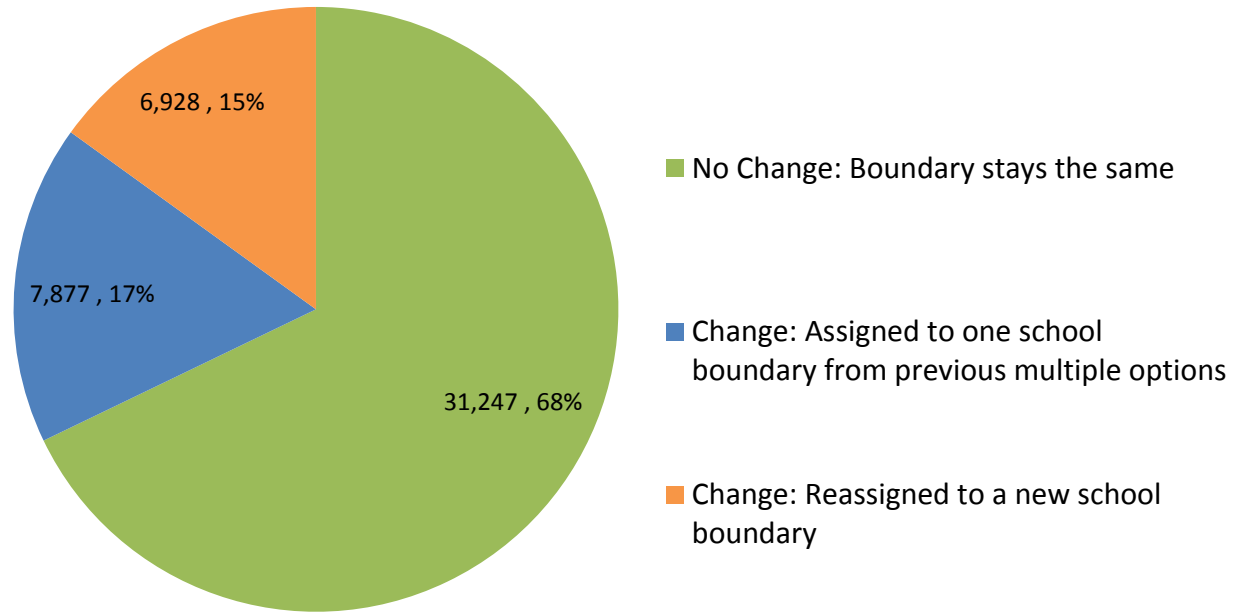
- The impact analysis is based on audited individual-level public school student data (DCPS and public charter students) from SY2013-14 provided by the Office of the State Superintendent of Education. The student-level data includes information about the student's demographics, grade, school attended, and address.
- The indicators used to measure the impact on public school students' schools of right include:
  - **Walkability.** The impact on walk distance was determined by calculating the difference in walk distances between each affected public school student's address and their current and new elementary school of right. If the difference in distances between the current and new school of right was more than two tenths of a mile (about two blocks), then the student was characterized as having an increase in walk distance. If the student's walk difference decreased by more than two tenths of a mile, then they were characterized as having a shorter walk distance. Any other difference between the two was characterized as no change or a comparable walk distance.
  - **Academic performance, MGP.** The technical team used two indicators, Median Growth Percentile (MGP) and DC CAS test scores, to measure school quality. MGP measures DC public school students' DC CAS test score growth over time relative to other DC public schools students. MGP is intended to measure the teacher/school's impact on students' test score growth and should remain constant even if the student body changes. The technical team calculated whether there is a statistical difference in MGP between the current and new elementary school of right for the affected elementary school students. If there was a statistically significant difference in the positive direction, then the student has access to a school with a better MGP score. If the difference was statistically significant and negative, then the student has access to a school of right with a worse MGP score. No statistically significant change meant the MGP scores are comparable. Schools missing MGP scores were dropped from the analysis.

# Data Sources and Methodology, continued

- **Academic performance, DC CAS.** The technical team used two indicators, Median Growth Percentile (MGP) and DC CAS test scores, to measure school quality. The DME measured whether the percent proficient or advanced on the DC CAS of the new school of right is comparable to the current school of right. Unlike MGP, DC CAS proficiency is determined by the students taking the test and is not a consistent characteristic of the school itself. Therefore, while the impact of DC CAS is included, one should not assume that the DC CAS scores will stay the same with a new student body. The DME averaged each DCPS school's 2012 and 2013 composite DC CAS scores, and ranked those average test scores into quartiles. If the new school of right was in a higher DC CAS quartile than the current school of right, then the student was categorized as having access to a school with a better DC CAS score. If the new school was in a lower quartile, then the student was categorized as having access to a school of right with a worse DC CAS score. If the scores of the new school of right was in the same quartile as the current school of right, the students were categorized as having comparable access. Students who currently have access to multiple schools of right were assigned the DC CAS quartile that was the highest for their current boundary. Schools missing DC CAS scores were dropped from the analysis.
- **Racial/ethnic diversity.** The technical team calculated a diversity index (or “entropy” index) that compares the racial/ethnic diversity of public elementary students living in the current elementary school boundary and new elementary school boundary. The index indicates whether the students living in the new elementary school boundaries have more, less, or comparable level of racial/ethnic diversity as the current boundary.
- **Income diversity.** The technical team calculated a diversity index (or “entropy” index) that compares the income diversity of public elementary students living in the current elementary school boundary and new elementary school boundary. The technical team used the *at-risk of academic failure* weight recently introduced in the FY15 Uniform per Student Funding Formula (the process used to allocate local education dollars to Local Education Agencies), which is consistent with the *Fair Student Funding and School-Based Budgeting Amendment Act of 2013*. The at-risk measure applies to students who are homeless, in the District's foster care system, qualify for Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP), or high school students that are one year older, or more, than the expected age for the grade in which the students are enrolled. The entropy diversity index compares whether a student's new elementary school boundary has a higher, lower, or comparable level of at risk students than the student's current boundary.

# **Impact of New Elementary School Boundaries**

# Citywide Impact of New Elementary School Boundary Changes

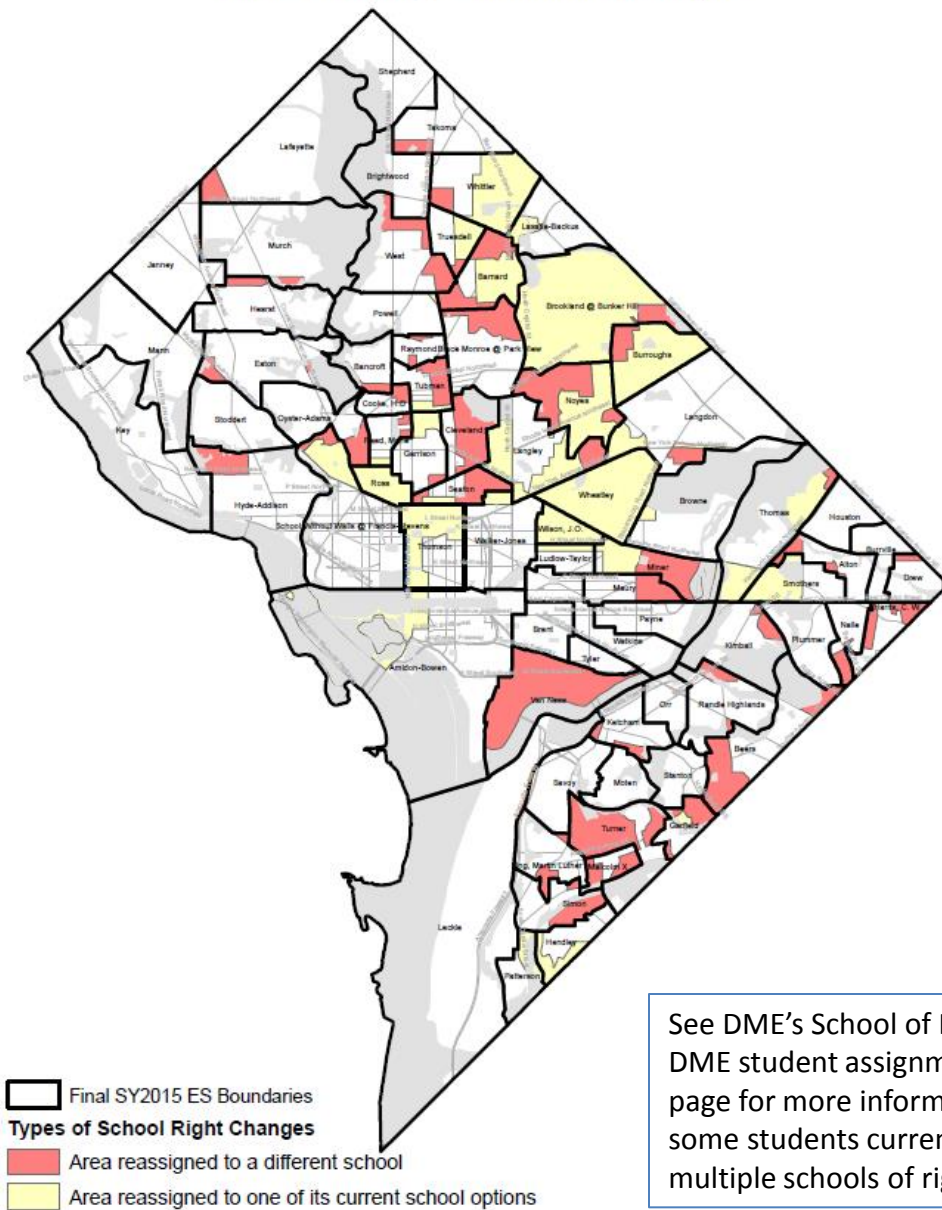


Source: 2013-14 student-level  
from OSSE, data analyzed by  
the Urban Institute

- 68% of all public elementary school students' rights would not be affected by the new boundaries
- 17% would be assigned to one school right from their current multiple right options
- 15% would be reassigned to a different school

Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school, shall maintain in-boundary rights at their current in-boundary school until they complete that school.

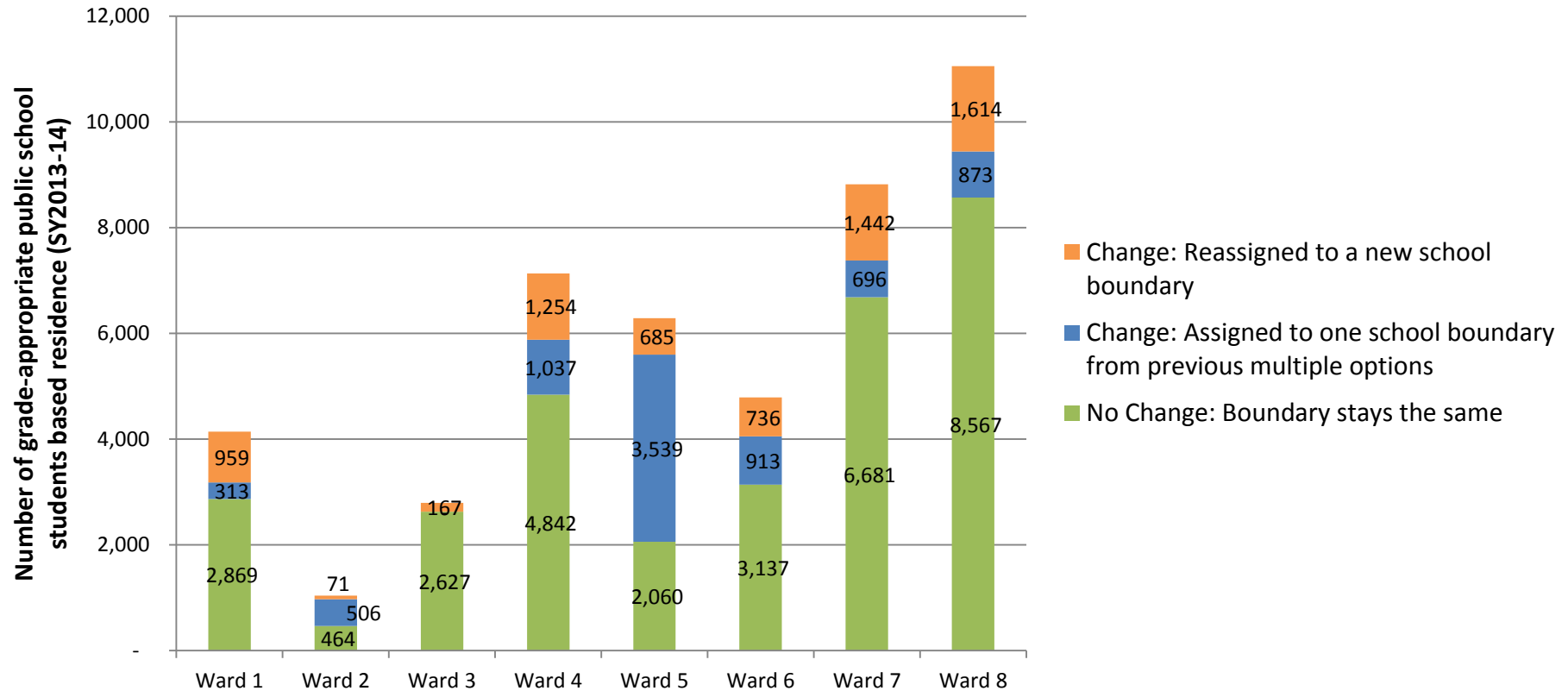
# **Areas of the City Where the New Elementary School Boundaries Reduce or Change Current Elementary School Rights**



See DME's School of Right on the DME student assignment data web page for more information about why some students currently have multiple schools of right

New boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school, shall maintain in-boundary rights at their current in-boundary school until they complete that school.

# Impact of New Elementary School Boundary Changes by Ward, 2013-14

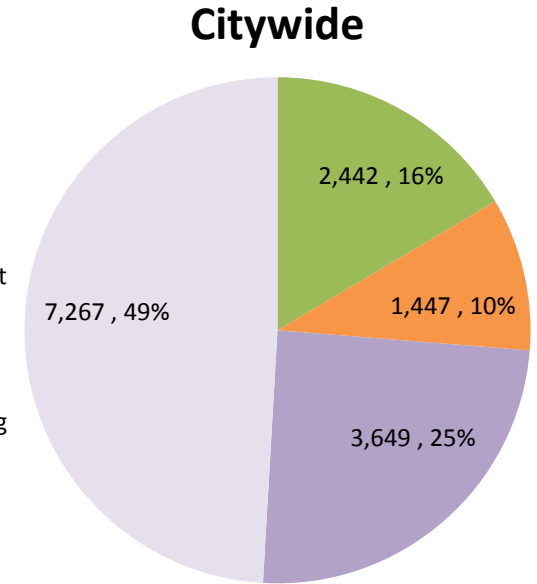
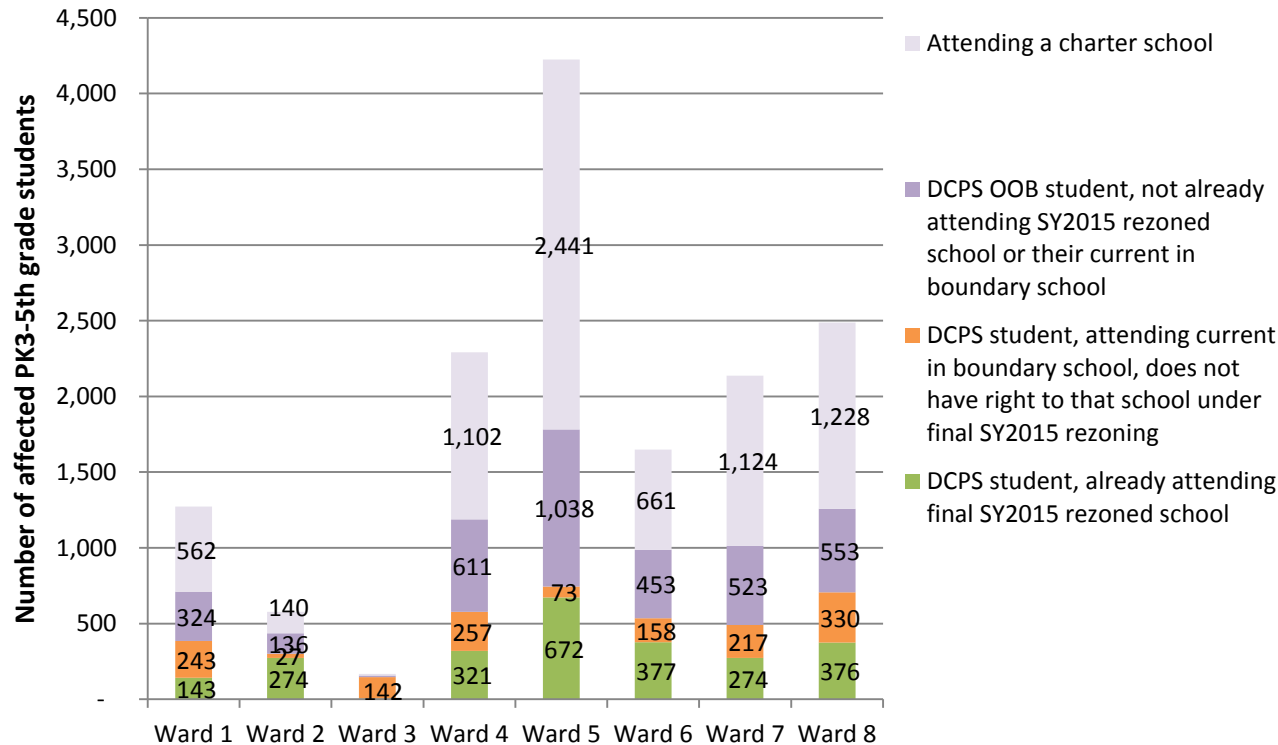


- Wards 4, 7, and 8 would have over 1,000 public elementary school students' rights being assigned to a new school boundary
- Ward 5 would have the greatest number of students' rights assigned to just one boundary from multiple boundary options due to the earlier school closures

New boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school, shall maintain in-boundary rights at their current in-boundary school until they complete that school.

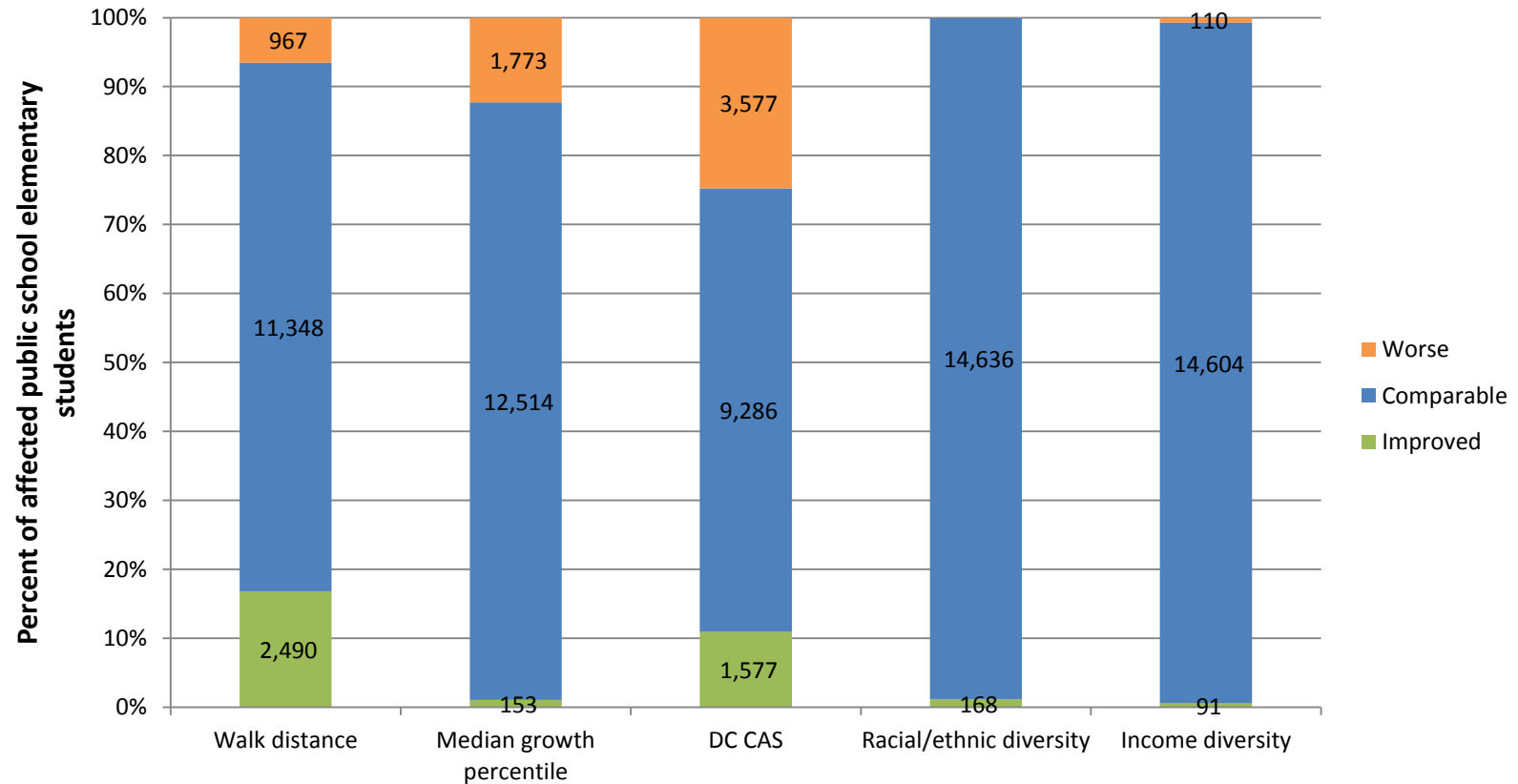


# Distribution of Elementary School Students Affected by the New Elementary School Boundary Changes



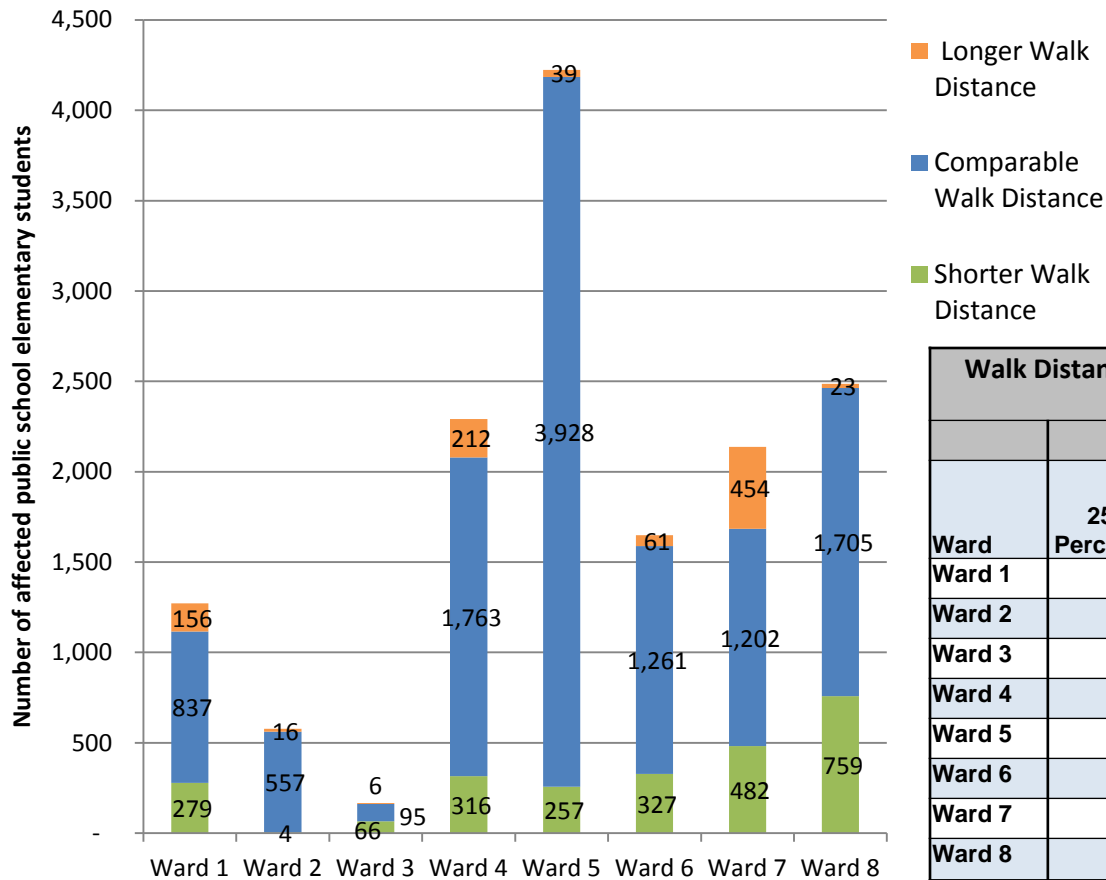
- The new boundaries will assign 16% of all affected elementary school students to the DCPS school that they are already attending.
- Another 10% of all affected elementary school students who are currently attending their in boundary school will be assigned to a different school of right, although phasing in will allow those students to remain at their school.
- 672 affected elementary school students in Ward 5 will be rezoned to the DCPS school they are already attending.
- The largest number of affected students who would lose their in boundary right where they are currently attending would be in Ward 8 (330 students).

# Changes in Characteristic Impacts for Affected Elementary School Students for New Elementary School Boundary Changes, Citywide



- More than two-thirds of the affected elementary school students would have the right to a new school boundary that is comparable to their current right across the five metrics.
- 17% of all affected elementary school students would have a shorter walk distance under the new boundary compared to their current boundary and another 7% would have a greater walk distance.
- 12% of affected elementary school students would be assigned to a school with lower MGP scores.
- 11% of affected elementary school students would have the right to a school with a higher DC CAS score and another 25% would be assigned to a school with a lower DC CAS score.
- Little impact on race/ethnic and income diversity of the residents located in the boundaries

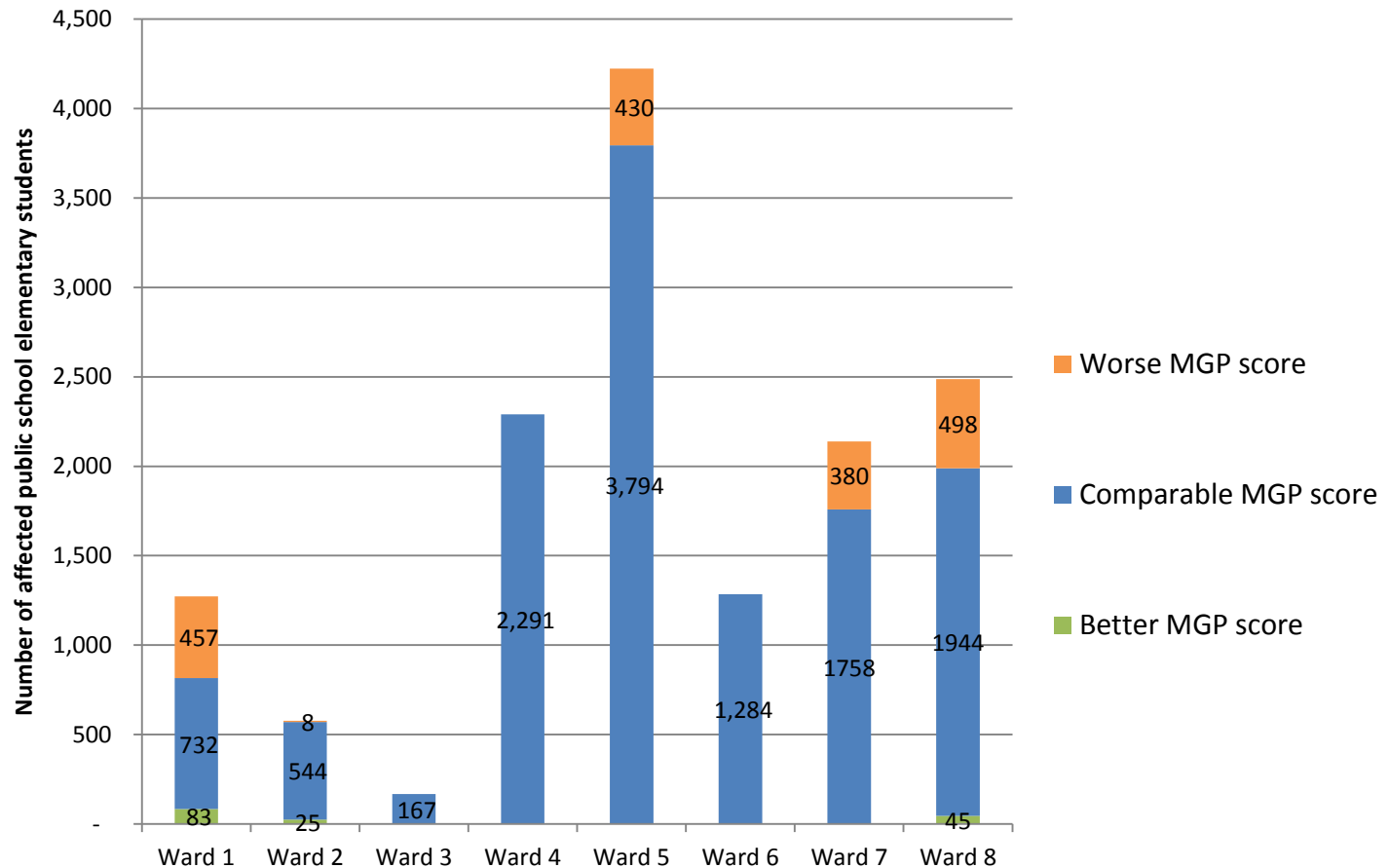
# Changes in Walk Distances for Affected Elementary School Students for New Elementary School Boundaries



Walk Distance between home and in boundary DCPS elementary school (miles)						
	Current Boundaries			New Boundaries		
Ward	25th Percentile	50th Percentile (Median)	75th Percentile	25th Percentile	50th Percentile (Median)	75th Percentile
Ward 1	0.28	0.40	0.52	0.27	0.39	0.51
Ward 2	0.23	0.39	0.50	0.23	0.32	0.49
Ward 3	0.37	0.60	0.78	0.37	0.51	0.78
Ward 4	0.27	0.46	0.61	0.28	0.43	0.58
Ward 5	0.38	0.60	0.76	0.37	0.54	0.76
Ward 6	0.23	0.38	0.49	0.23	0.35	0.47
Ward 7	0.33	0.53	0.69	0.32	0.50	0.67
Ward 8	0.35	0.51	0.64	0.32	0.47	0.60

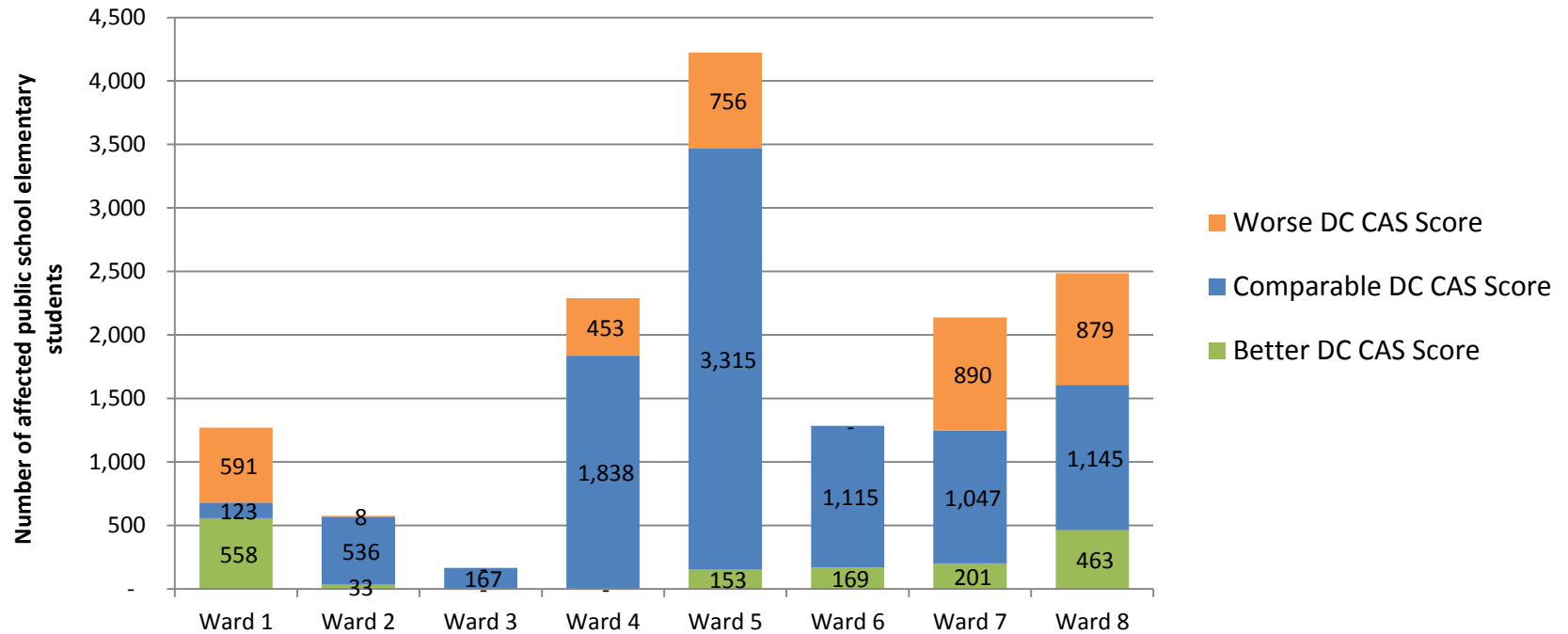
- The measure for a change in distance is an increase or decrease of at least two tenths of a mile (about two blocks).
- 759 affected Ward 8 and 482 Ward 7 elementary school students would have a shorter walk distance.
- Alternatively, 454 Ward 7 and 212 Ward 4 elementary students would have a longer walk distance.
- The table shows the average distance by quartiles between students' home and in boundary school for former and new boundaries.

# Changes in MGP Scores for Affected Elementary School Students for New Elementary School Boundaries



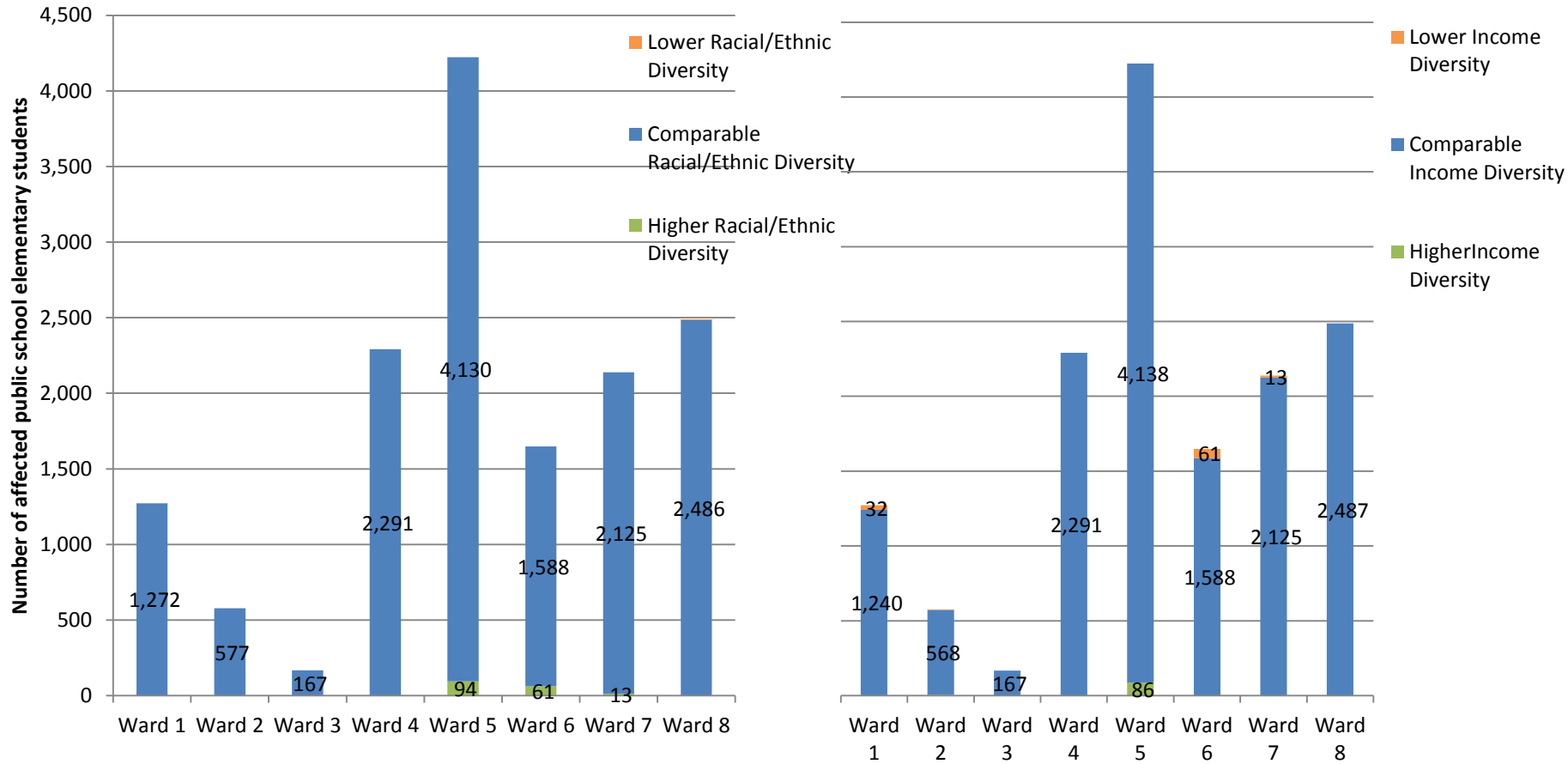
- Almost all of the all affected elementary students (87%) would be reassigned to an elementary school with a similar MGP score.
- Affected elementary students in Wards 1, 5, 7 and 8 would have the largest number of students who are assigned to schools with lower MGP scores than they are currently assigned to.

# Changes in DC CAS Scores for Affected Elementary School Students for New Elementary School Boundaries



- 64% all of the all affected elementary students would be reassigned to an elementary school with a DC CAS score in the same DC CAS quartile tier.
- Affected elementary students in Wards 1, 6, and 7 have the greatest number of students with the right to attend a school in a higher DC CAS quartile than they currently have a right to driven by portions of current Cardozo being reassigned to Columbia Heights; Columbia Heights being reassigned to Deal; Browne being reassigned to either Eliot-Hine, Stuart-Hobson, or Kelly Miller; Eliot-Hine being reassigned to Jefferson; and Walker-Jones being reassigned to Stuart Hobson.
- Ward 5 has the greatest number of students with a right to a middle school with a lower DC CAS quartile tier compared to their current middle school(s) of right, driven by students with a current right to both Wheatley and Browne being reassigned to Browne

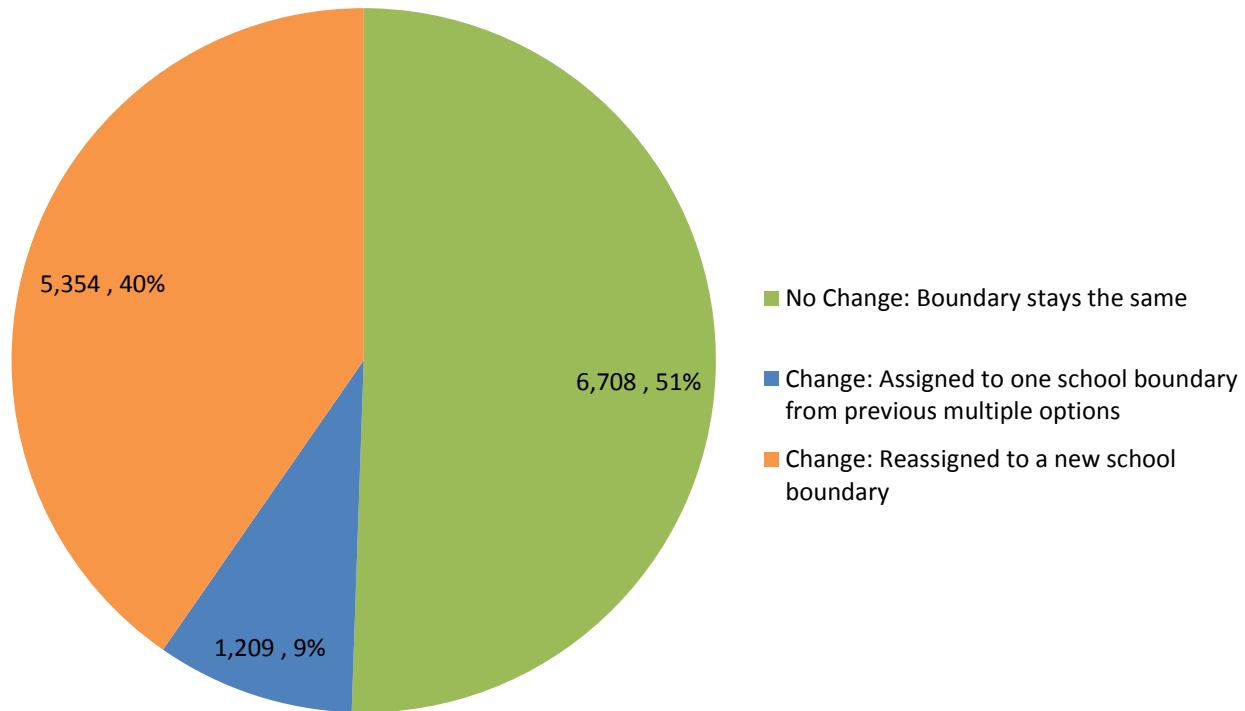
# Changes in Diversity for Affected Elementary School Students in New Elementary School Boundaries



- Most affected elementary school students would be reassigned to an elementary school boundary with comparable racial/ethnic and income diversity.
- 94 students in Wards 5 and 61 students in Ward 6 would be assigned to boundaries with greater racial/ethnic boundaries than they are currently assigned.
- 86 students in Ward 5 would be assigned to a boundary with greater income diversity.

# **Impact of New Middle School Boundaries**

# Impact of New Middle School Boundary Changes, Citywide 2013-14



n=13,271

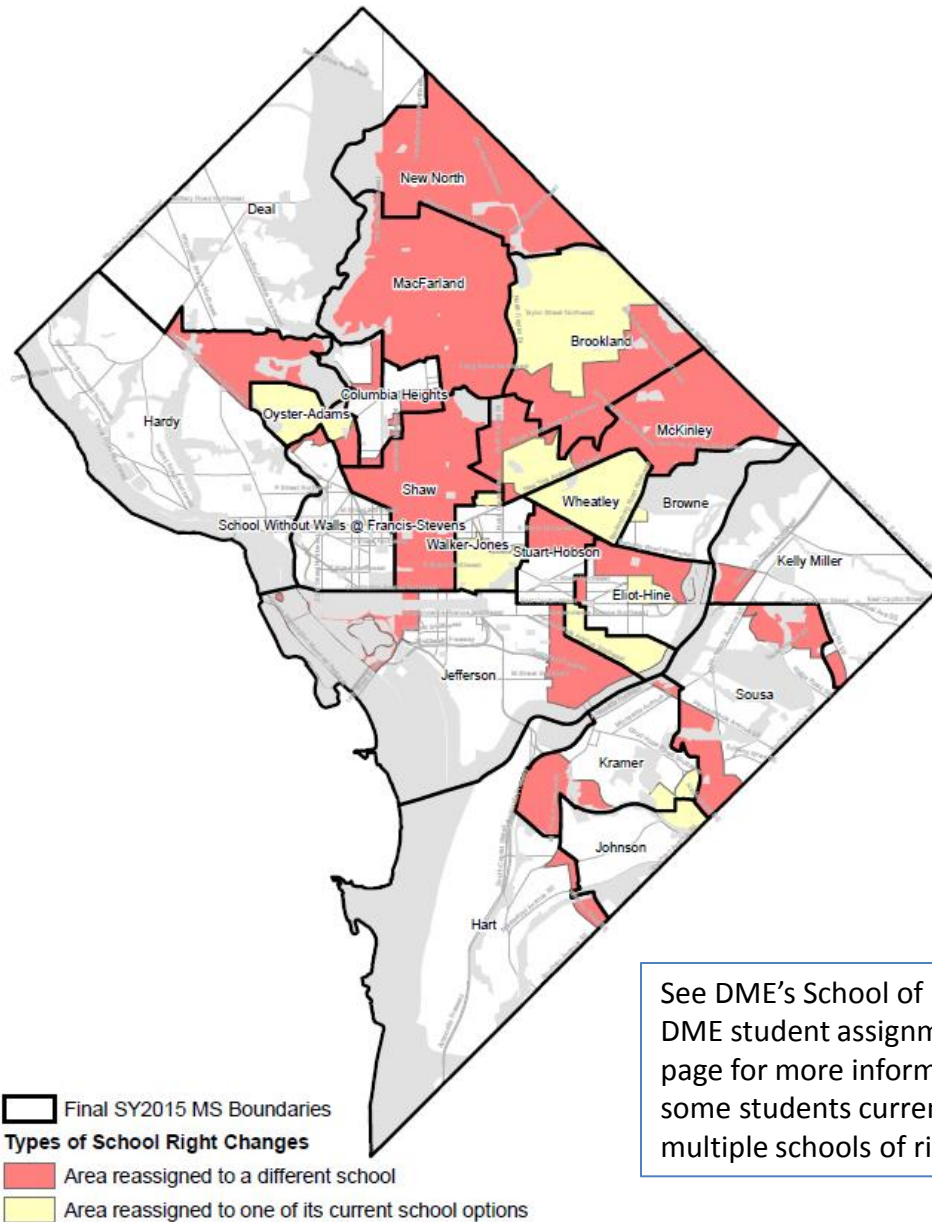
Source: 2013-14 student-level from OSSE, data analyzed by the Urban Institute

- 51% of all public middle school students' rights would not be affected by the new boundaries
- 9% would be assigned to one of multiple right options
- 40% would be reassigned to a different school

New boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school shall maintain in-boundary rights at their current in-boundary school until they complete that school.



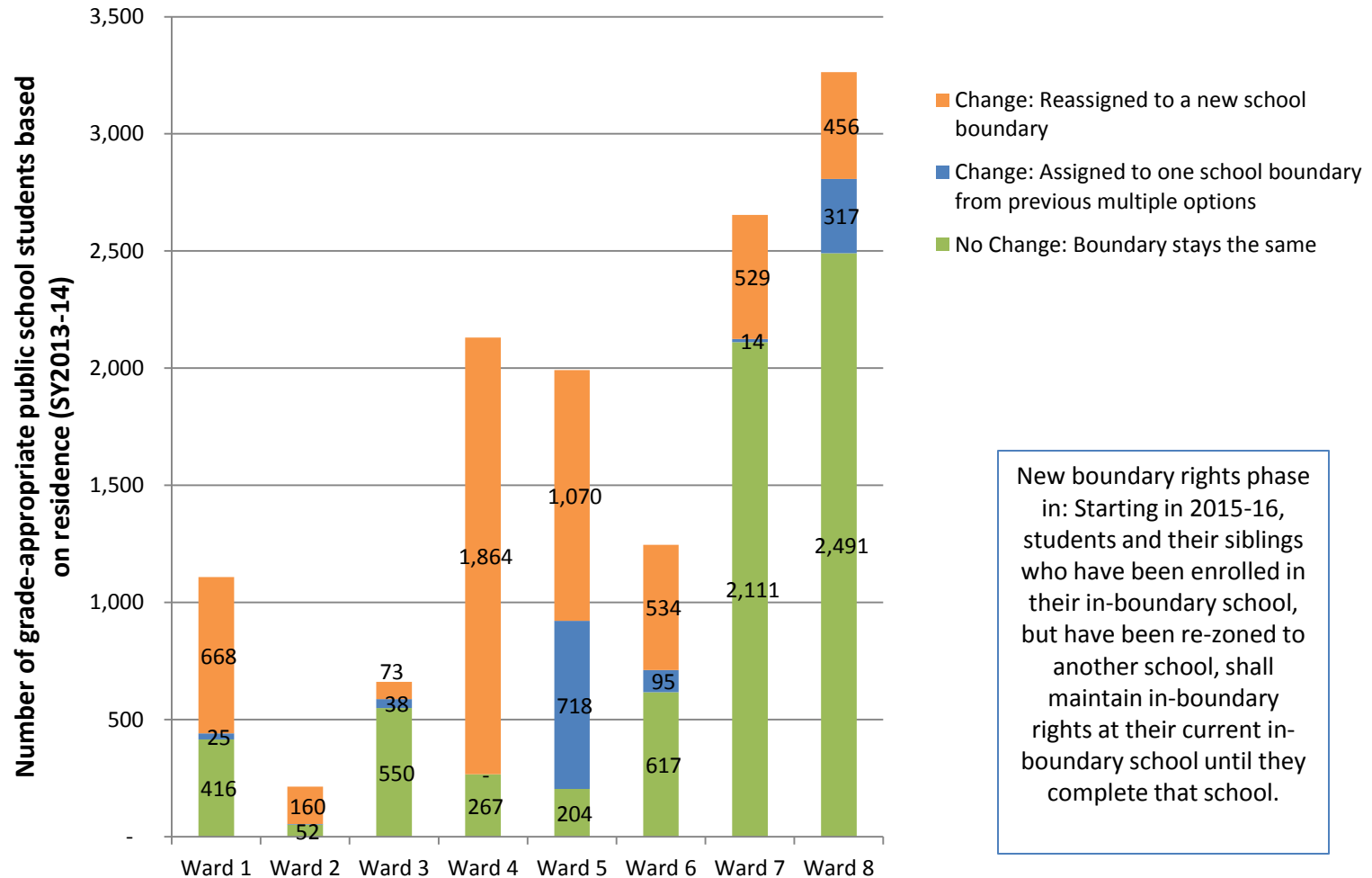
## Areas of the City Where New Middle School Boundaries Reduce or Change Current Middle School Rights



See DME's School of Right on the DME student assignment data web page for more information about why some students currently have multiple schools of right

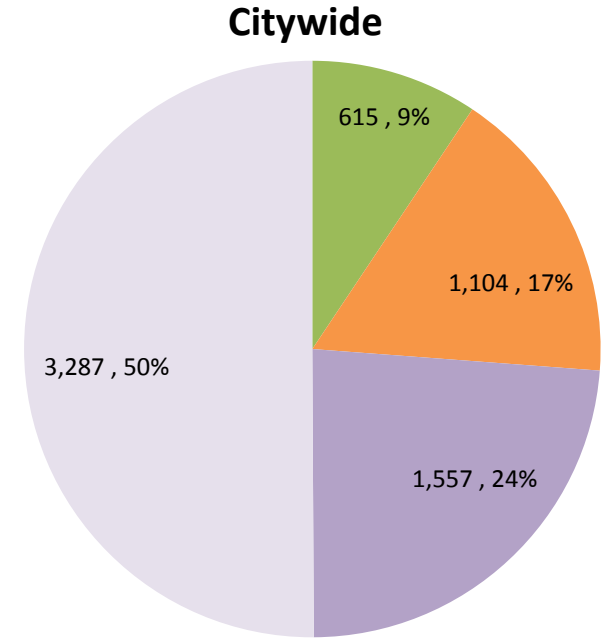
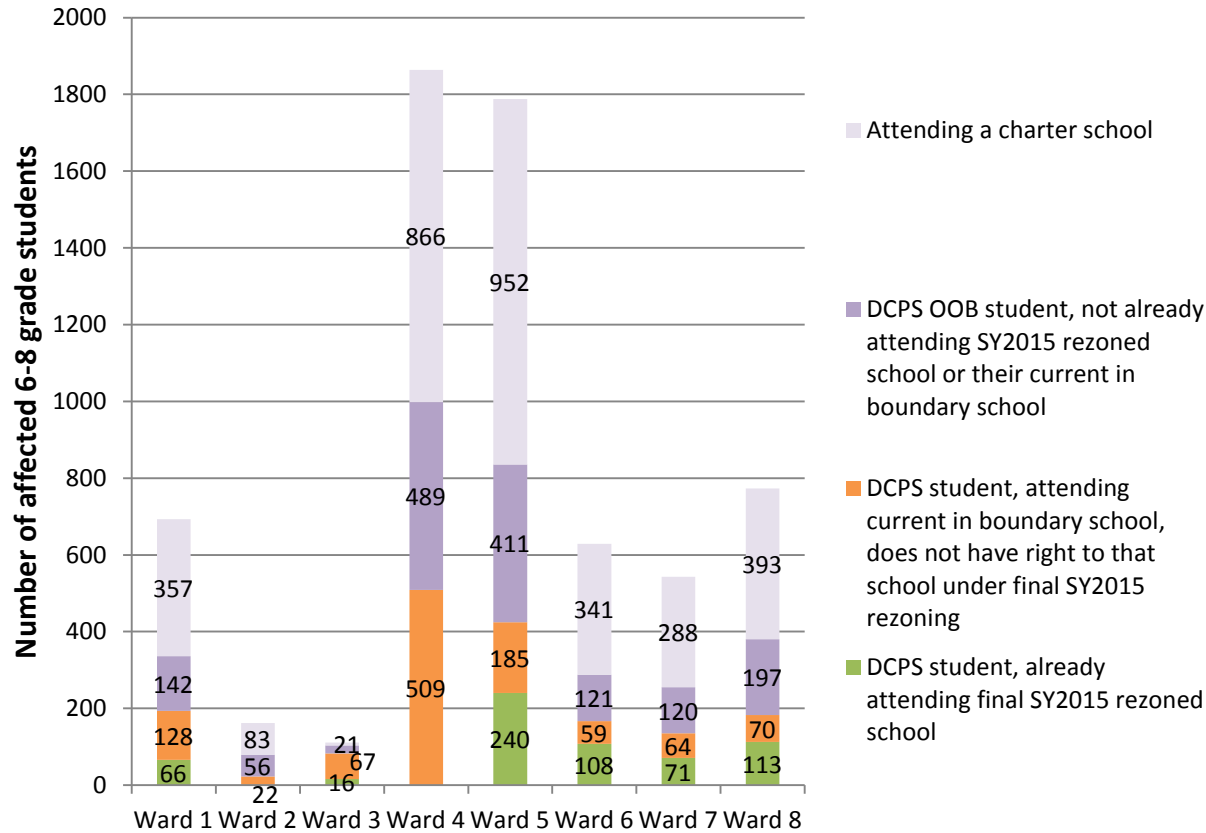
New boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school shall maintain in-boundary rights at their current in-boundary school until they complete that school.

# Impact of New Middle School Boundary Changes by Ward, 2013-14



- Wards 4 and 5 will have the greatest number of middle school public students assigned to a new school of right because the Advisory recommendations convert education campuses to elementary schools and would open a new North MS, a new MacFarland MS, and a new Shaw MS.

# Distribution of Middle School Students Affected by the New Middle School Boundary Changes



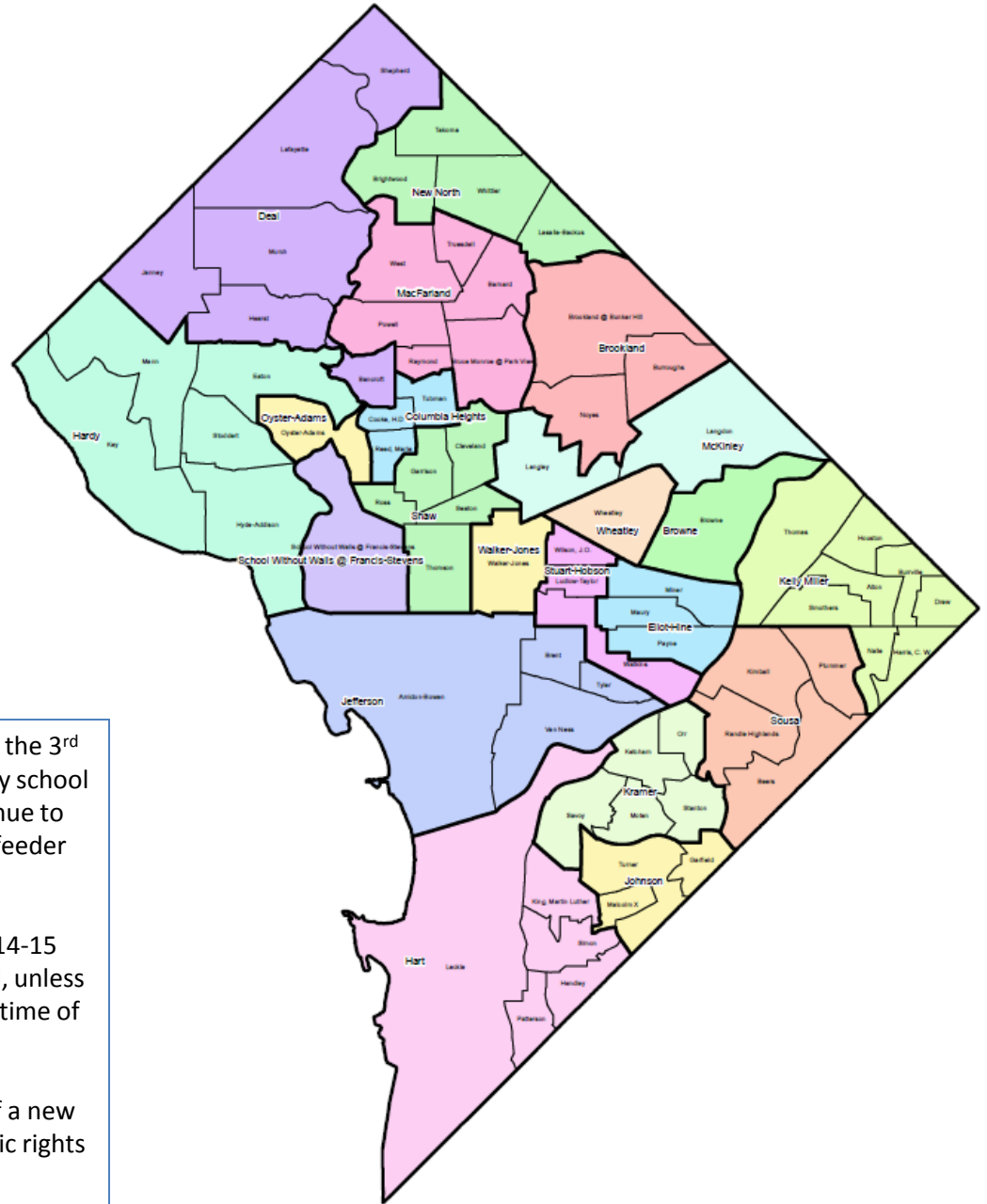
- The rezoning would assign 615 DCPS middle school students to the school that they are already attending (9% of affected middle school students).
- Another 1,104 DCPS students (17% of all affected middle school students) who are currently attending in boundary would lose their right to that school in their SY2015 rezoned boundaries.
- The greatest number of affected students losing their in boundary right where they are currently attending is in Ward 4 (509 students) because they would be attending the North MS or the reopened MacFarland MS.

# How the New Elementary School Feeder Patterns Result in the New Middle School Boundaries

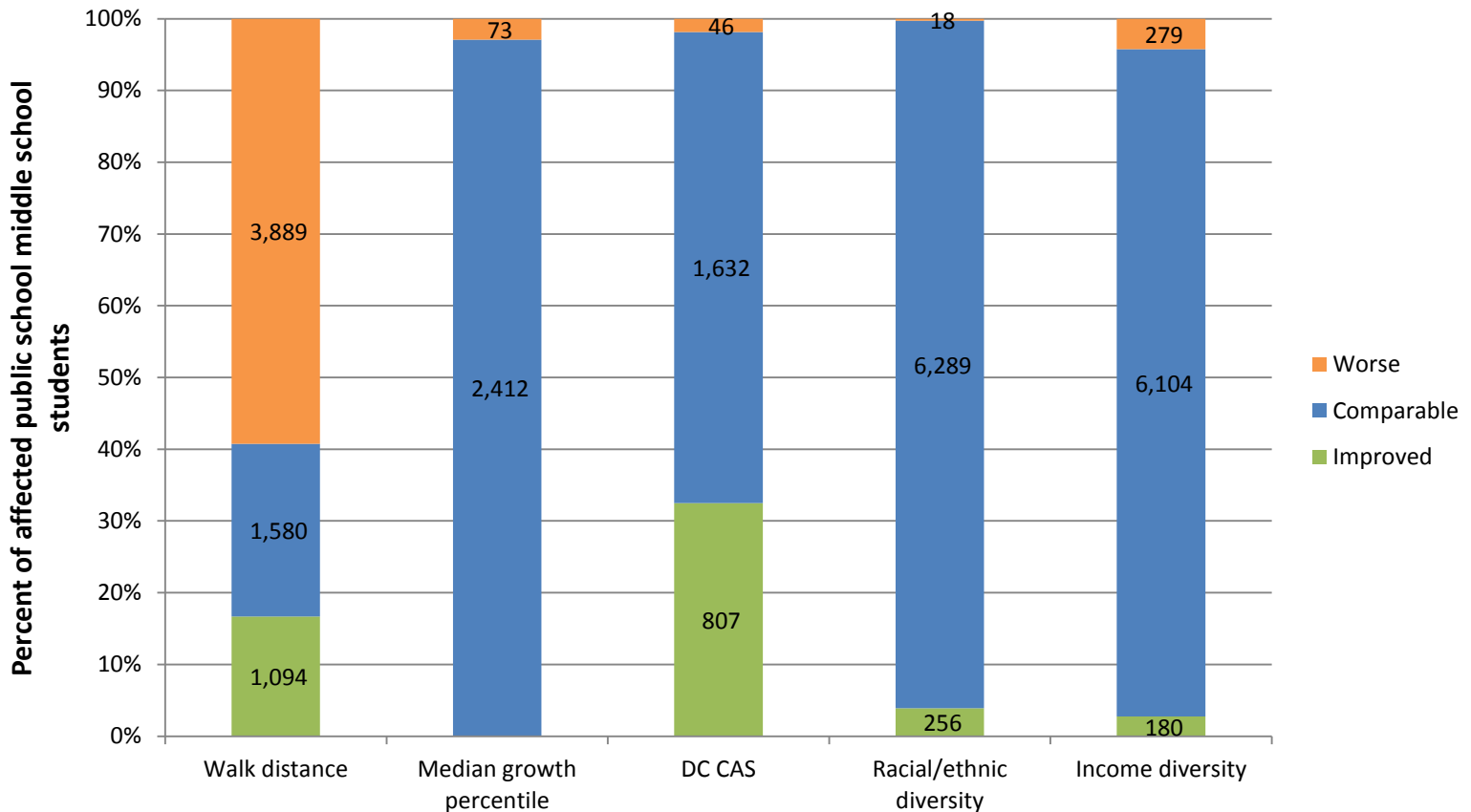
New geographic rights phase in: Students who are enrolled in the 3<sup>rd</sup> through 5<sup>th</sup> grade for the 2014-15 school year at an elementary school whose feeder pathway changes shall have the right to continue to their former destination school OR to the newly designated feeder pattern beginning in the 2015-16 school year.

Students who are in the PK3 through 2<sup>nd</sup> grade as of the 2014-15 school year shall feed into the newly designated feeder school, unless they have a sibling attending the former middle school at the time of transition.

Students whose new feeder pathway relies on the opening of a new school shall retain their current feeder pathway and geographic rights until the new school is open.

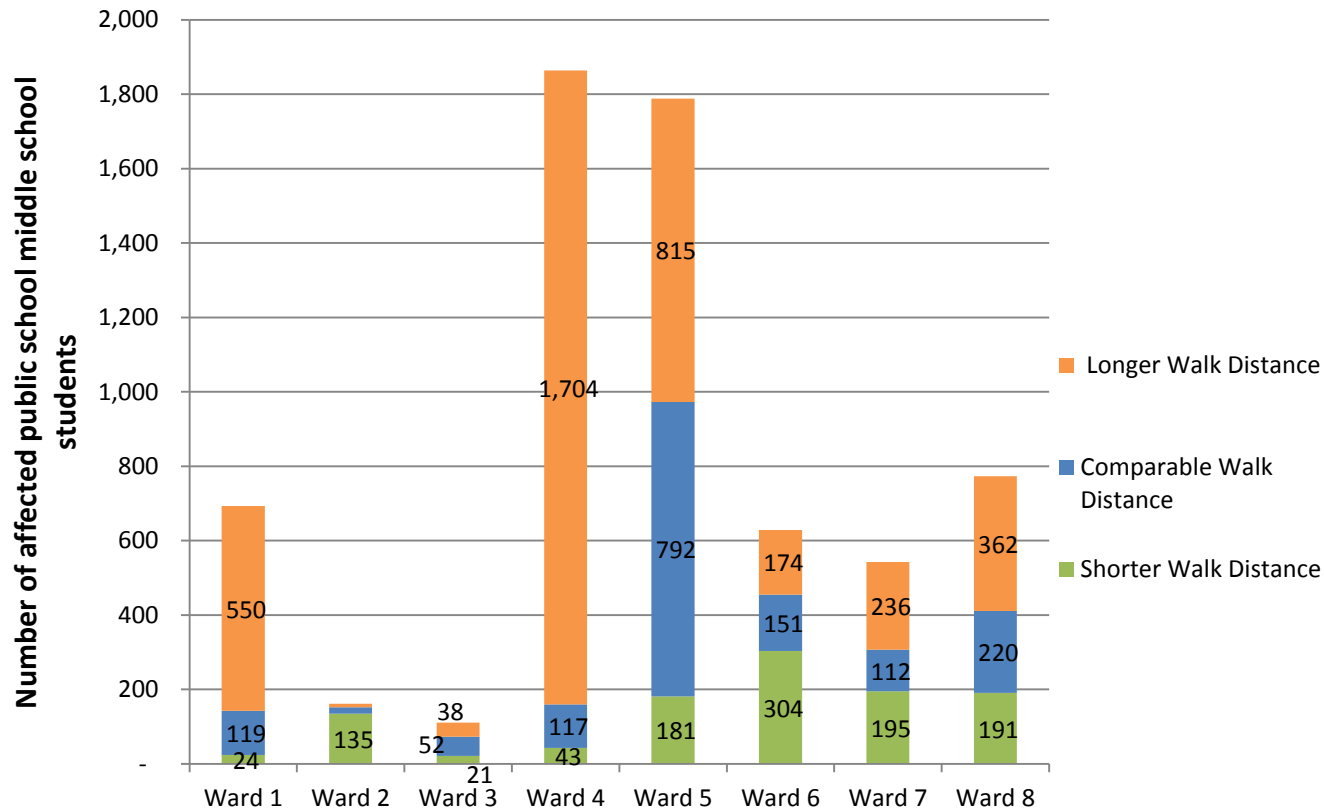


# Changes in Characteristic Impacts for Affected Middle School Students Citywide



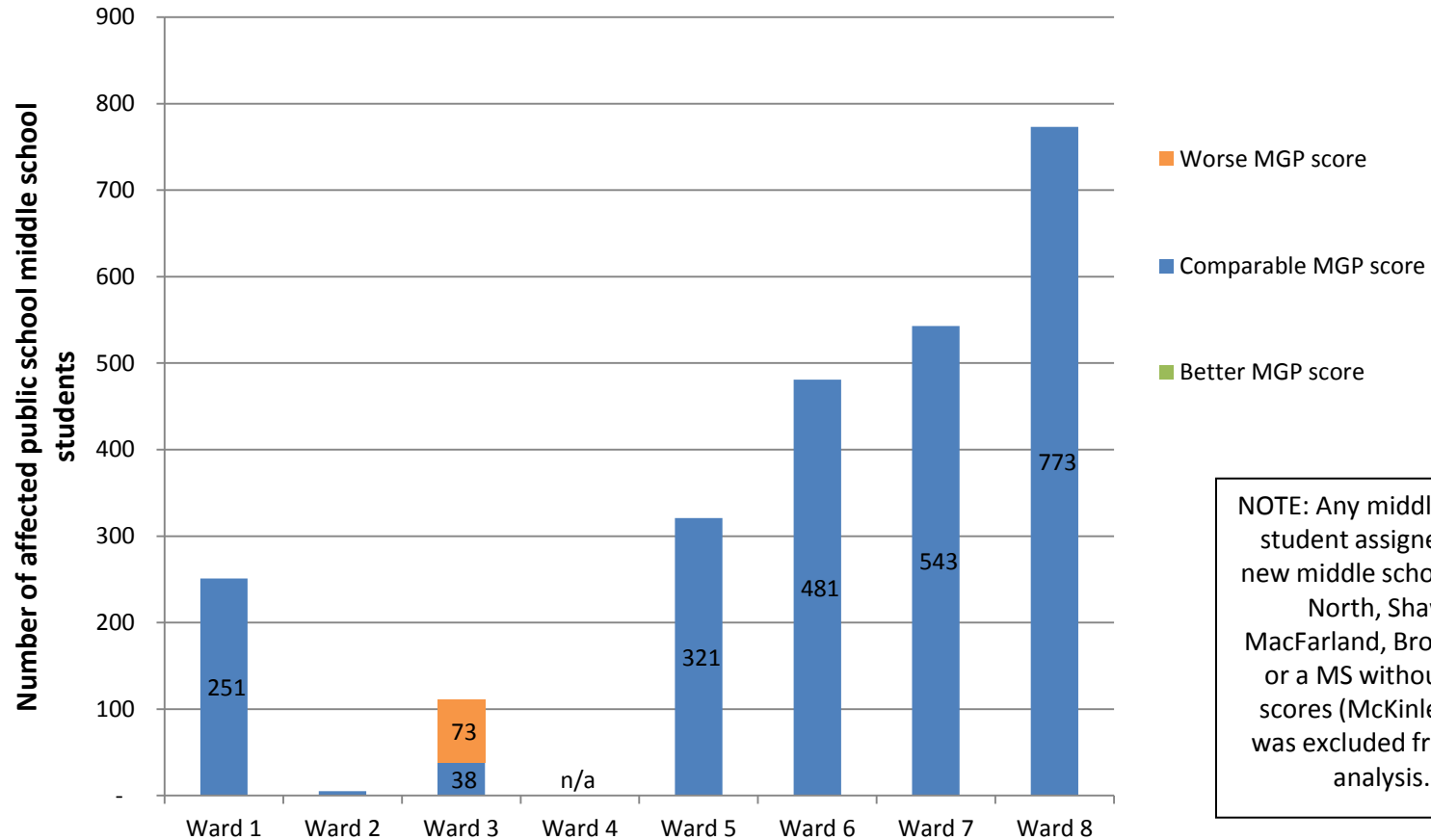
- For most measures, affected middle school students on average would be reassigned to a school that is comparable to their current school or boundary.
- Walk distance is the exception where 17% of the affected middle school students would have a shorter walk distance than they currently have and another 59% would have a longer walk distance. This is because the rezoning plan will convert education campuses to elementary schools and open three new middle schools.

# Changes in Walk Distances for Affected Middle School Students for the New Middle School Boundaries



- The measure for a change in walk distance is conservative for middle school -- an increase or decrease of at least two tenths of a mile (about two blocks).
- Affected students in Wards 1, 4, and 5 would experience an increase in their walk distance; however, this is mainly due to the new middle schools that will open (Brookland, MacFarland, Shaw, and the new North MS)
- Alternatively, a large number of affected middle school students in Wards 2, 5, 6, 7 and 8 would experience a shorter walk distance to their newly rezoned middle school.

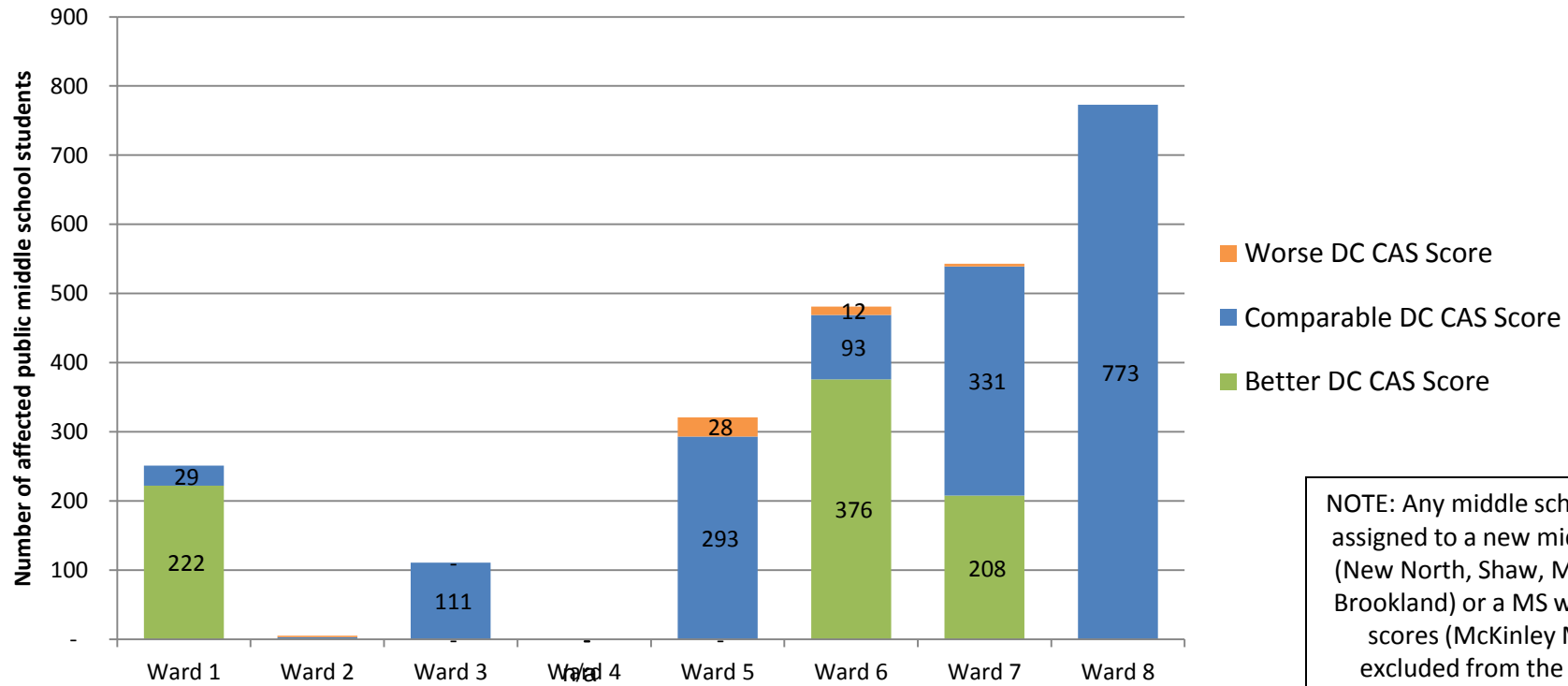
# Changes in MGP Scores for Affected Middle School Students for New Middle School Boundaries



NOTE: Any middle school student assigned to a new middle school (New North, Shaw, MacFarland, Brookland) or a MS without test scores (McKinley MS) was excluded from the analysis.

- Almost all of the all affected middle students (97%) would be reassigned to a middle school with a similar MGP score.
- 73 affected students in Ward 3 would be reassigned to a middle school with a lower MGP score than what they are currently assigned to.

# Changes in DC CAS Scores for Affected Middle School Students for New Middle School Boundaries



Affected elementary students in Wards 1, 6, and 7 have the greatest number of students who have the right to attend a school in a higher DC CAS quartile than they currently have a right to.

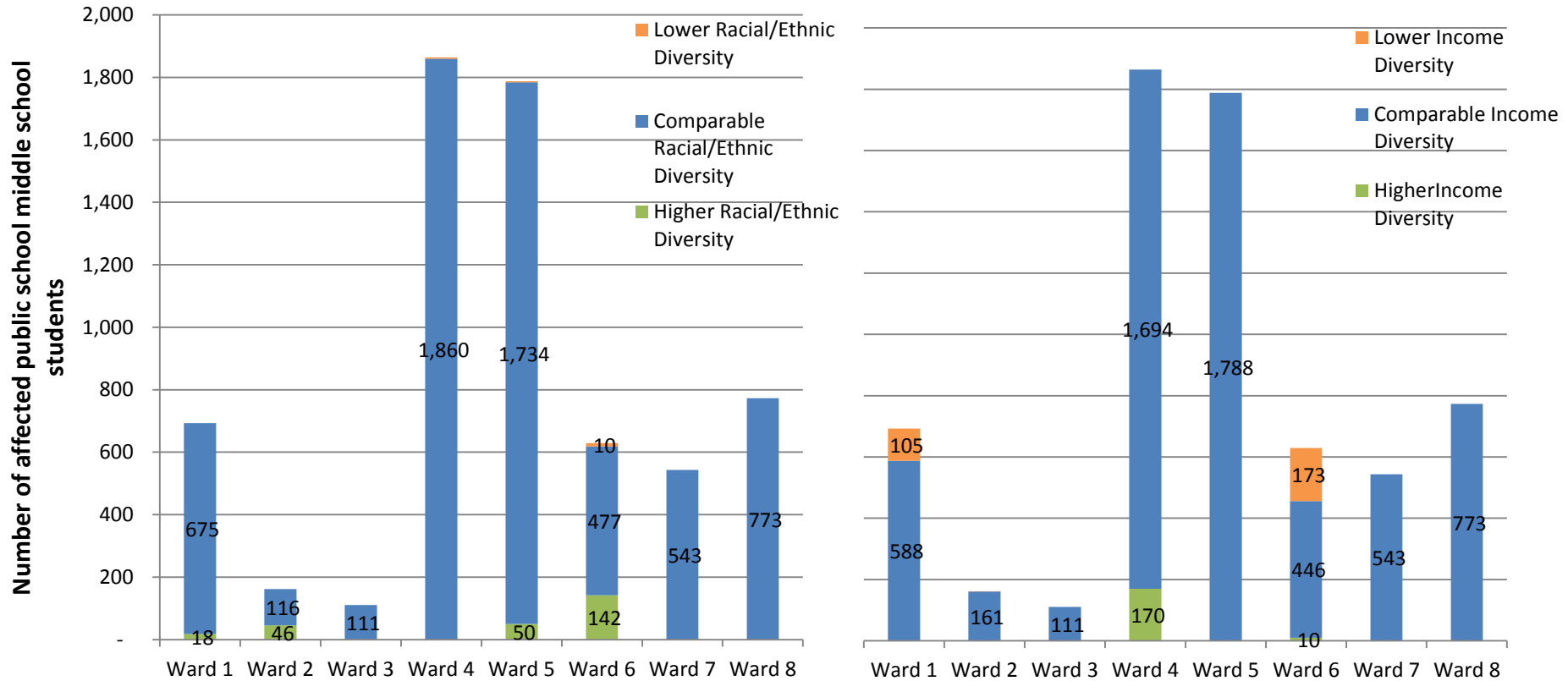
This is driven by students with a current right to: Cardozo being reassigned to Columbia Heights; Columbia Heights being reassigned to Deal; Browne being reassigned to either Eliot-Hine, Stuart-Hobson, or Kelly Miller; Eliot-Hine being reassigned to Jefferson; and Walker-Jones being reassigned to Stuart Hobson.

Ward 5 has the greatest number of students who would have a right to a middle school with a lower DC CAS quartile compared to their current middle school(s) of right.

This is driven by students with a current right to both Wheatley and Browne being reassigned to Browne.



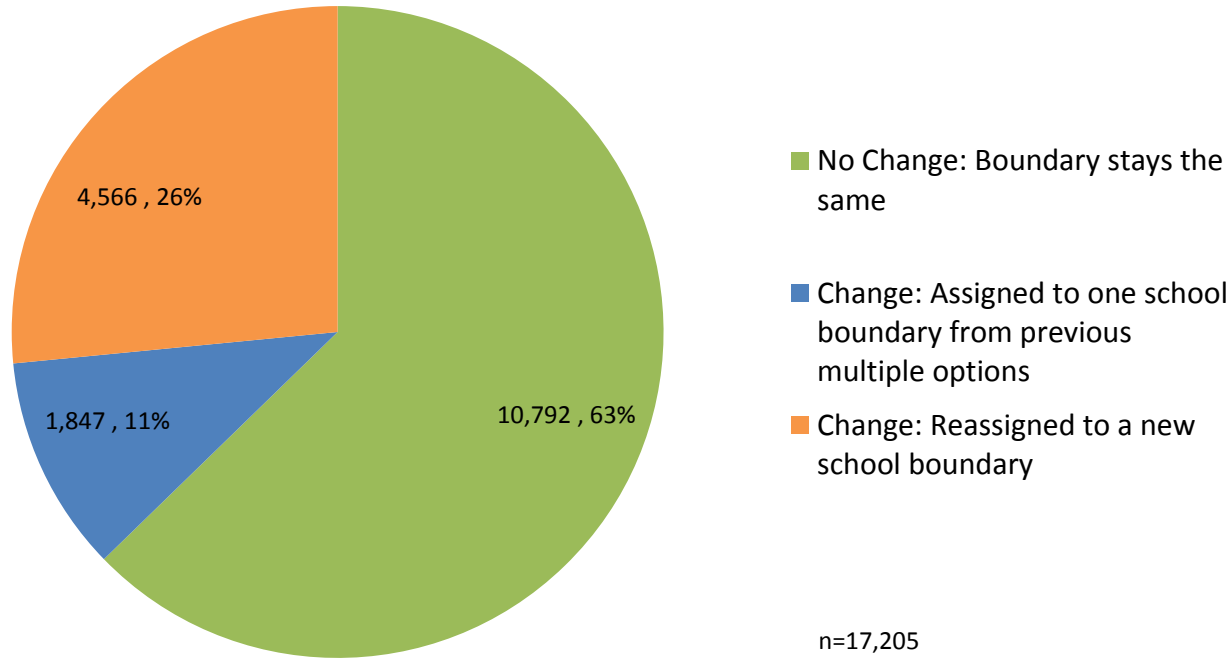
# Changes in Diversity for Affected Middle School Students for New Middle School Boundaries



- Most affected middle school students would be reassigned to a middle school boundary with comparable racial/ethnic and income diversity.
- 142 affected middle school students in Ward 6 would be reassigned to a middle school boundary with higher racial/ethnic diversity and 170 Ward 4 middle school students would be reassigned to a boundary with higher income diversity.
- 173 affected students in Ward 6 and 105 affected Ward 1 students would be assigned to a boundary with lower racial and income diversity.

# **Impact of New High School Boundaries**

# Impact of New High School Boundary Changes, Citywide 2013-14



n=17,205

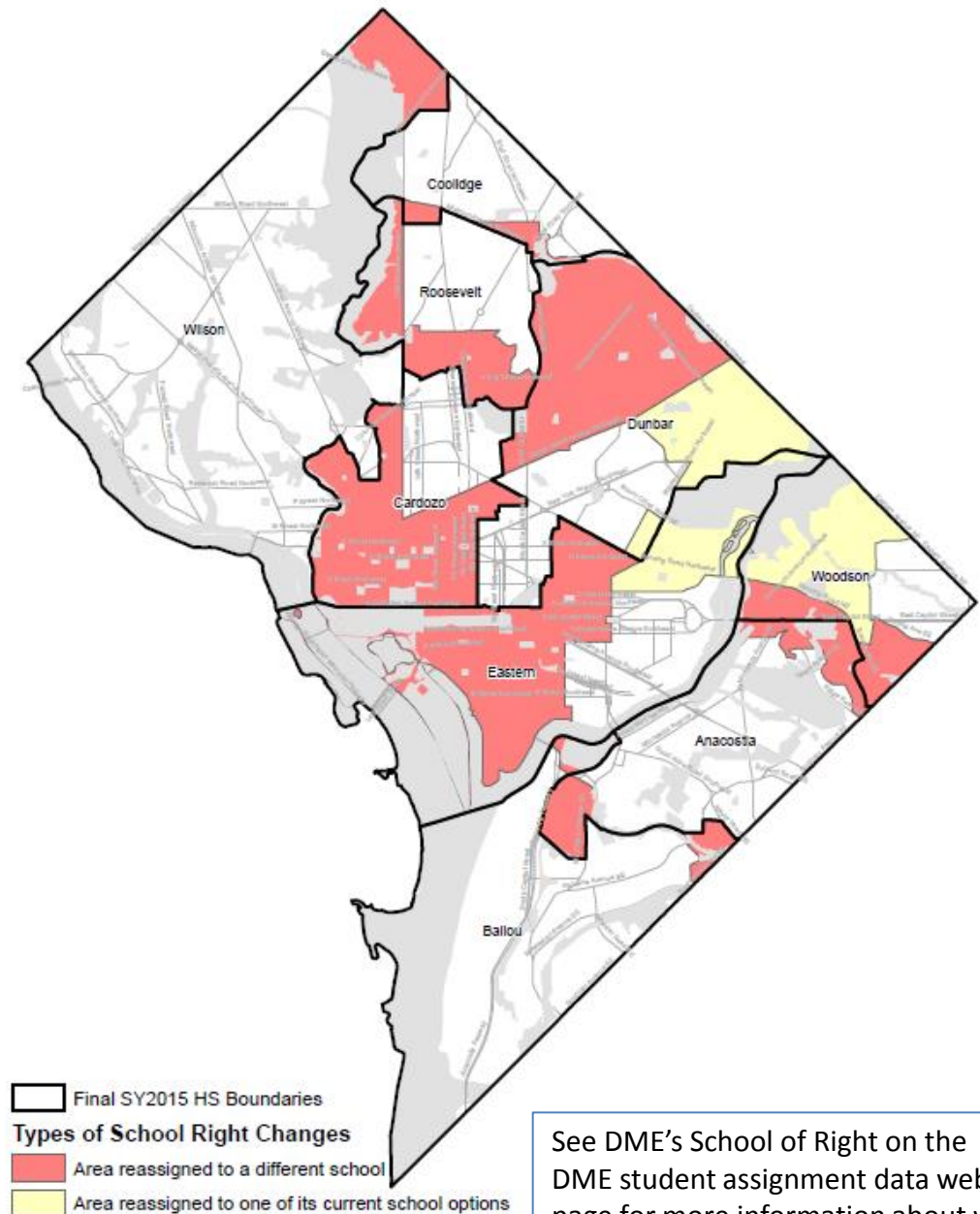
Source: 2013-14 student-level from OSSE, data analyzed by the Urban Institute

- 63% of all public high school students' rights would not be affected by the new high school boundaries
- 11% would be assigned to one of school right from their current multiple right options
  - These students live in the current Spingarn HS boundary.
- 26% would be rezoned to a different DCPS high school of right

New boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school, shall maintain in-boundary rights at their current in-boundary school until they complete that school.

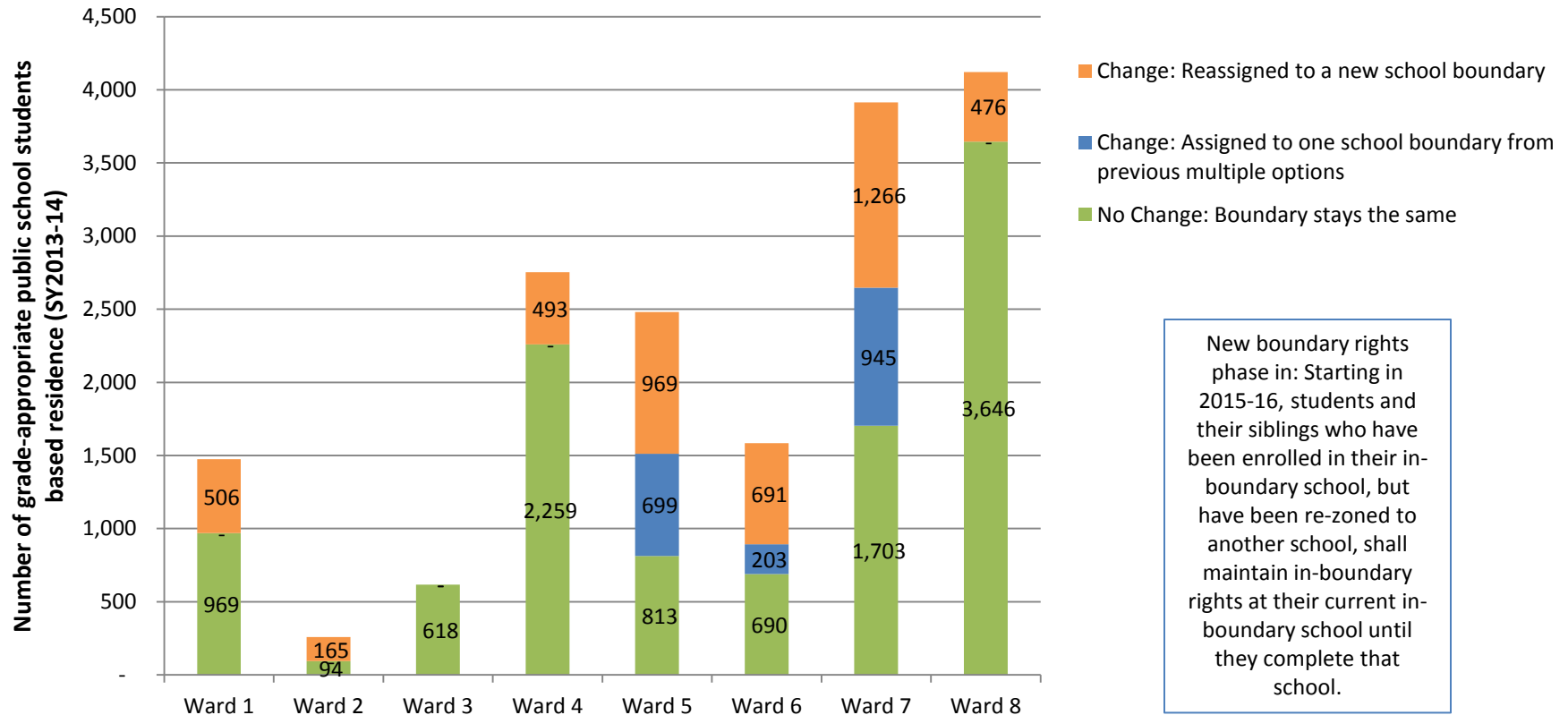
## Areas Where New DCPS High School Boundaries Reduce or Change Current High School Rights

New boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school, shall maintain in-boundary rights at their current in-boundary school until they complete that school.



See DME's School of Right on the DME student assignment data web page for more information about why some students currently have multiple schools of right

# Impact of New DCPS High School Boundary Changes by Ward, 2013-14



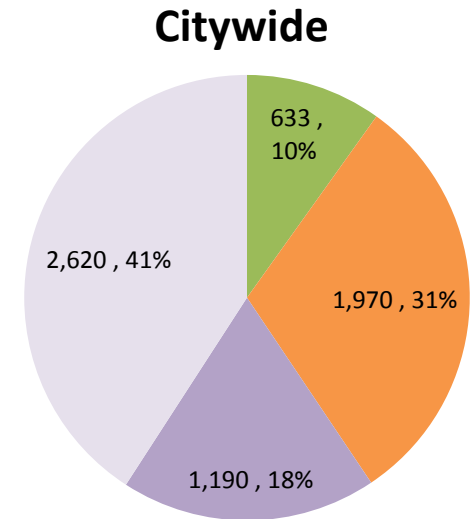
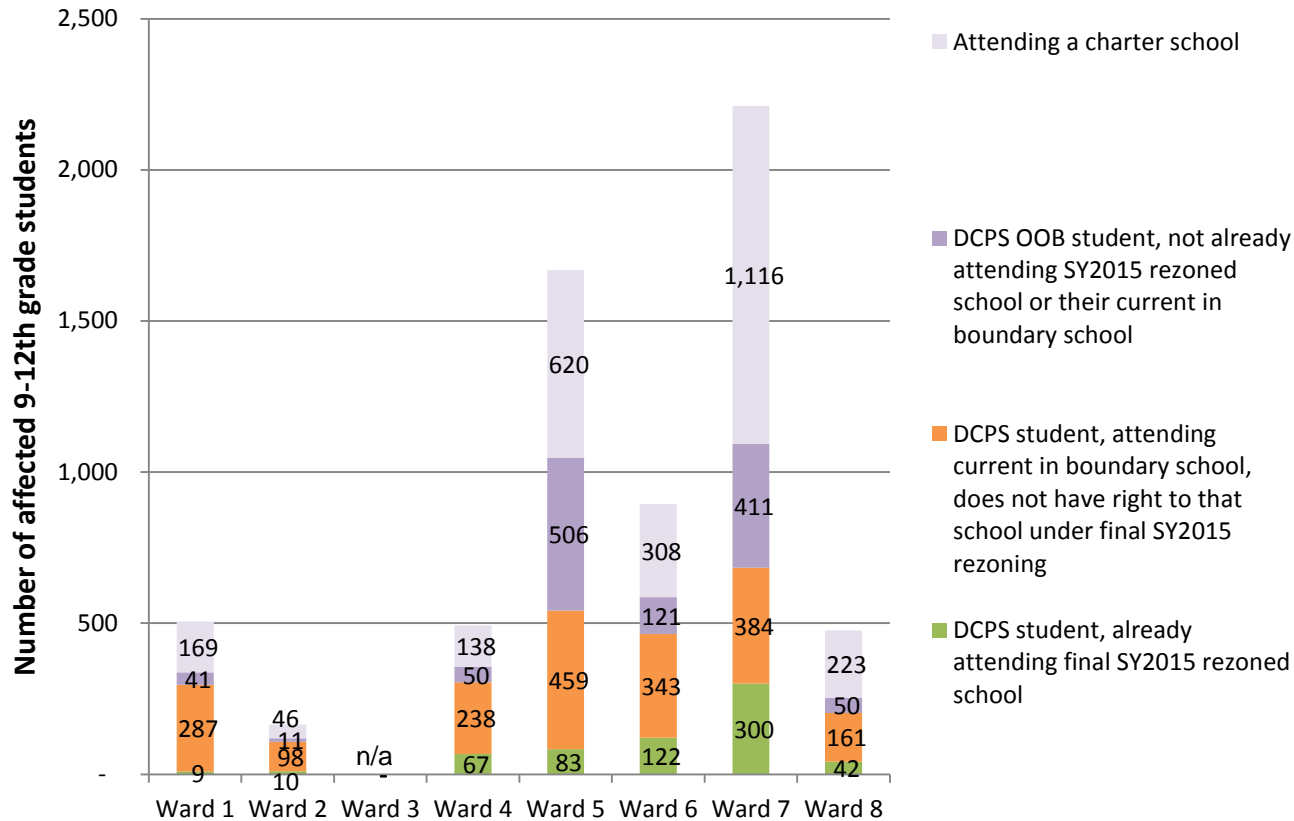
- Due to the new geographic feeder alignment of the ES, MS, and HS boundaries, Wards 5 and 7 would have a larger number of affected high school students.
- In Ward 7, the changes are driven by portions of the current Eastern boundary being reassigned to H.D. Woodson and Anacostia.
- In Ward 5, portions of the current Roosevelt and Cardozo boundaries would be reassigned to Dunbar.
- The students assigned to just one school boundary from previous options are students from the former Spingarn boundary and who have rights currently to Eastern, HD Woodson and Dunbar.

# Impact of the New High School Rights on Affected High School Students, 2013-14

Current High School Right 1	Current High School Right 2	Current High School Right 3	New High School Right	Total Number Affected High School Students
Eastern	HD Woodson	Dunbar	HD Woodson	864
Eastern			HD Woodson	778
Cardozo			Roosevelt	625
Eastern	HD Woodson	Dunbar	Eastern	570
Roosevelt			Dunbar	539
Eastern			Anacostia	488
Eastern	HD Woodson	Dunbar	Dunbar	413
Cardozo			Dunbar	356
Wilson			Eastern	325
Dunbar			Cardozo	290
Anacostia			Ballou	276
Dunbar			Eastern	239
Ballou			Anacostia	200
Wilson			Cardozo	174
Roosevelt			Coolidge	153
Coolidge			Wilson	80
Wilson			Roosevelt	43
<b>Total</b>				<b>6,413</b>

- The largest group of affected high school students (864 students) are those living in the former Spingarn boundary (those with current rights to Eastern, HD Woodson, and Dunbar). They are now reassigned to just HD Woodson, one of their current options.
- Another 778 students currently living in the Eastern boundary are reassigned to HD Woodson, in order to better align with HD Woodson's building capacity

# Distribution of High School Students Affected by New High School Boundary Changes

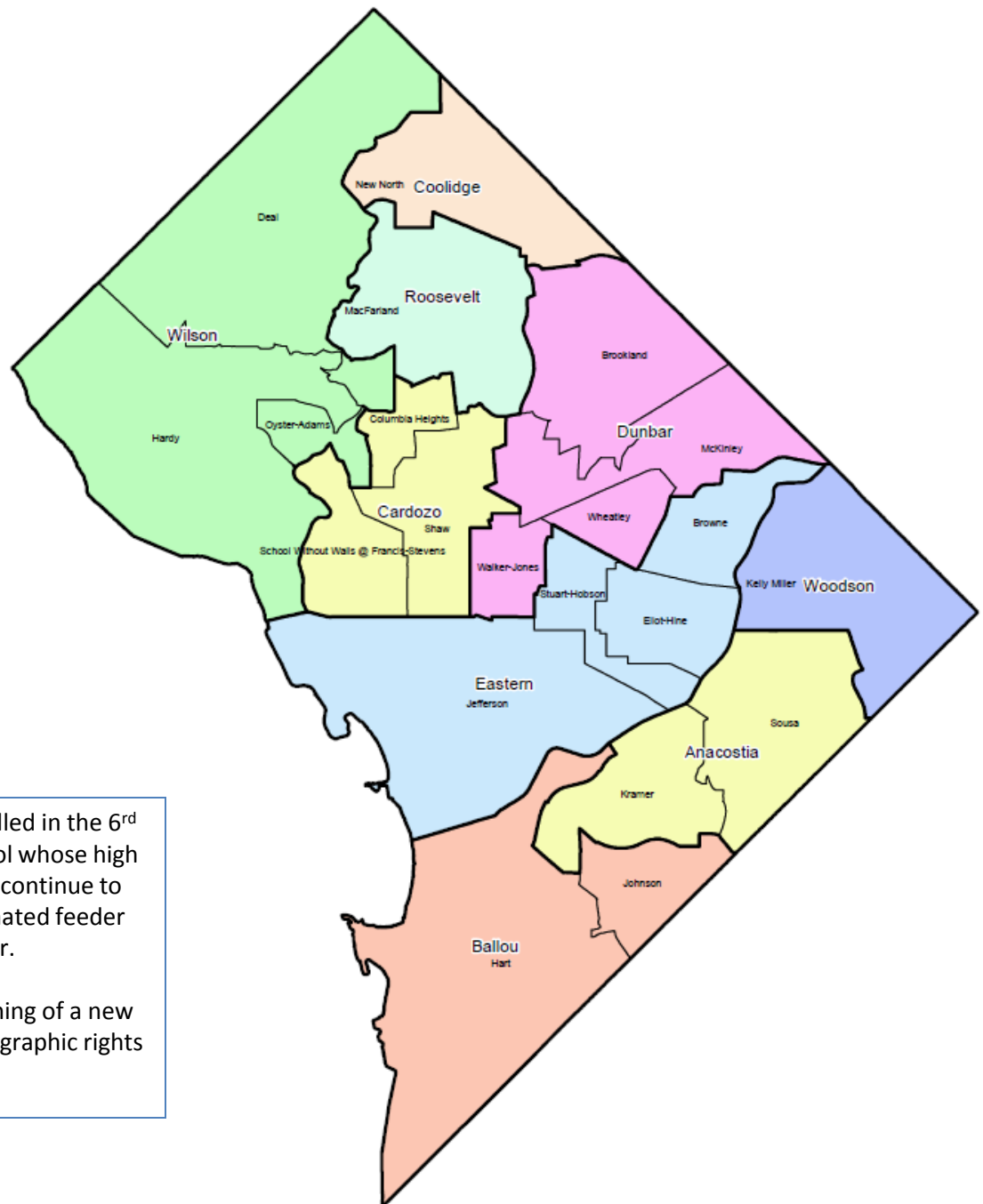


- The new boundaries would assign 633 DCPS high school students to the school that they are already attending (10% of all affected high school students).
- Another 1,970 DCPS high school students (31% of all affected high school students) who are currently attending in boundary would lose their right to their current in boundary school, in phasing in policies were not in effect.
- The greatest number of affected students losing their in boundary right where they are currently attending is in Wards 5, 6, and 7.

## How the New Middle School Feeder Patterns Result in the New High School Boundaries

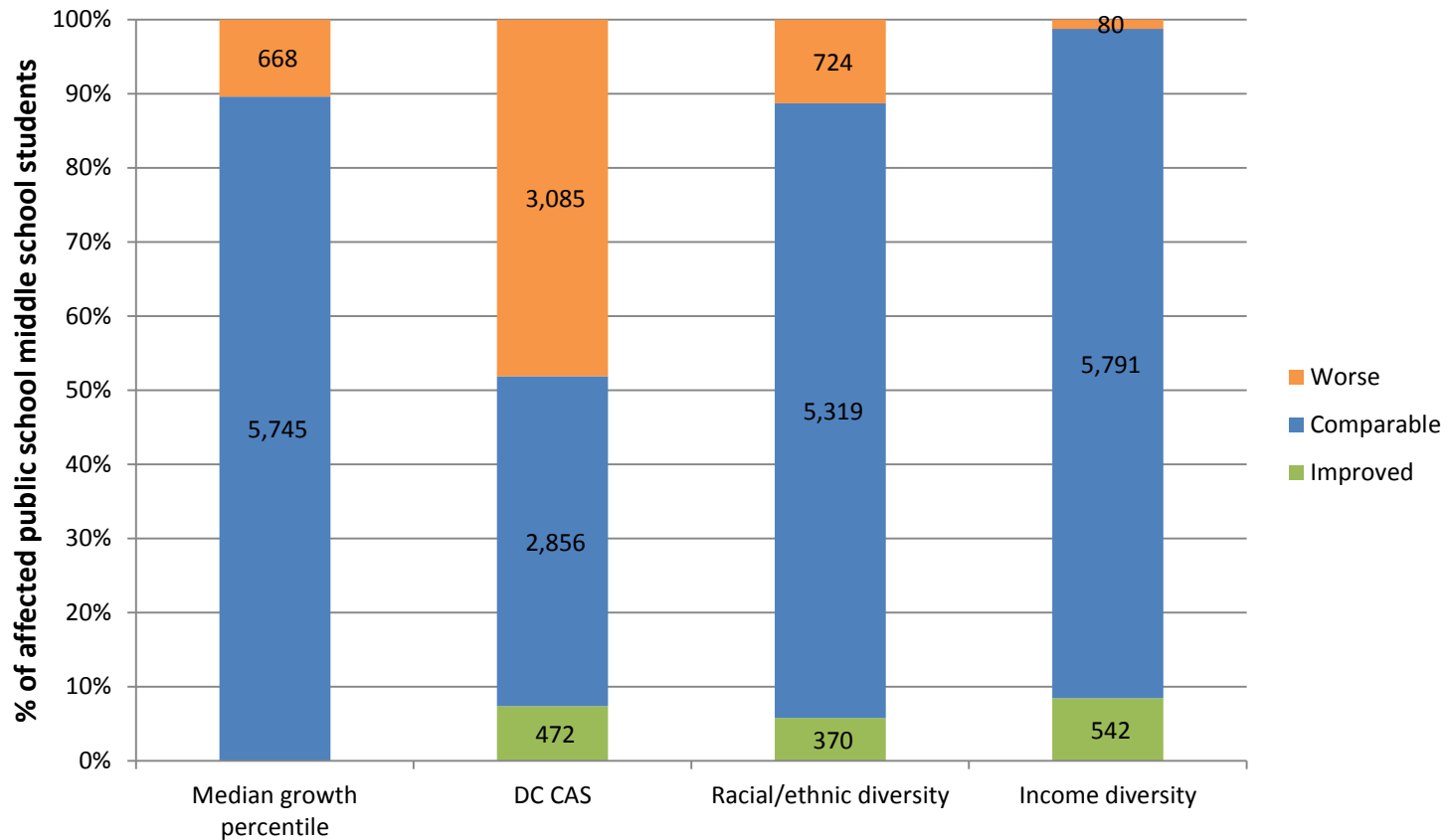
New geographic rights phase in: Students who are enrolled in the 6<sup>rd</sup> through 8<sup>th</sup> grade for the 2014-15 school year at a school whose high school feeder pathway changes shall have the right to continue to their former destination school OR to the newly designated feeder pattern beginning in the 2015-16 school year.

Students whose new feeder pathway relies on the opening of a new school shall retain their current feeder pathway and geographic rights until the new school is open.



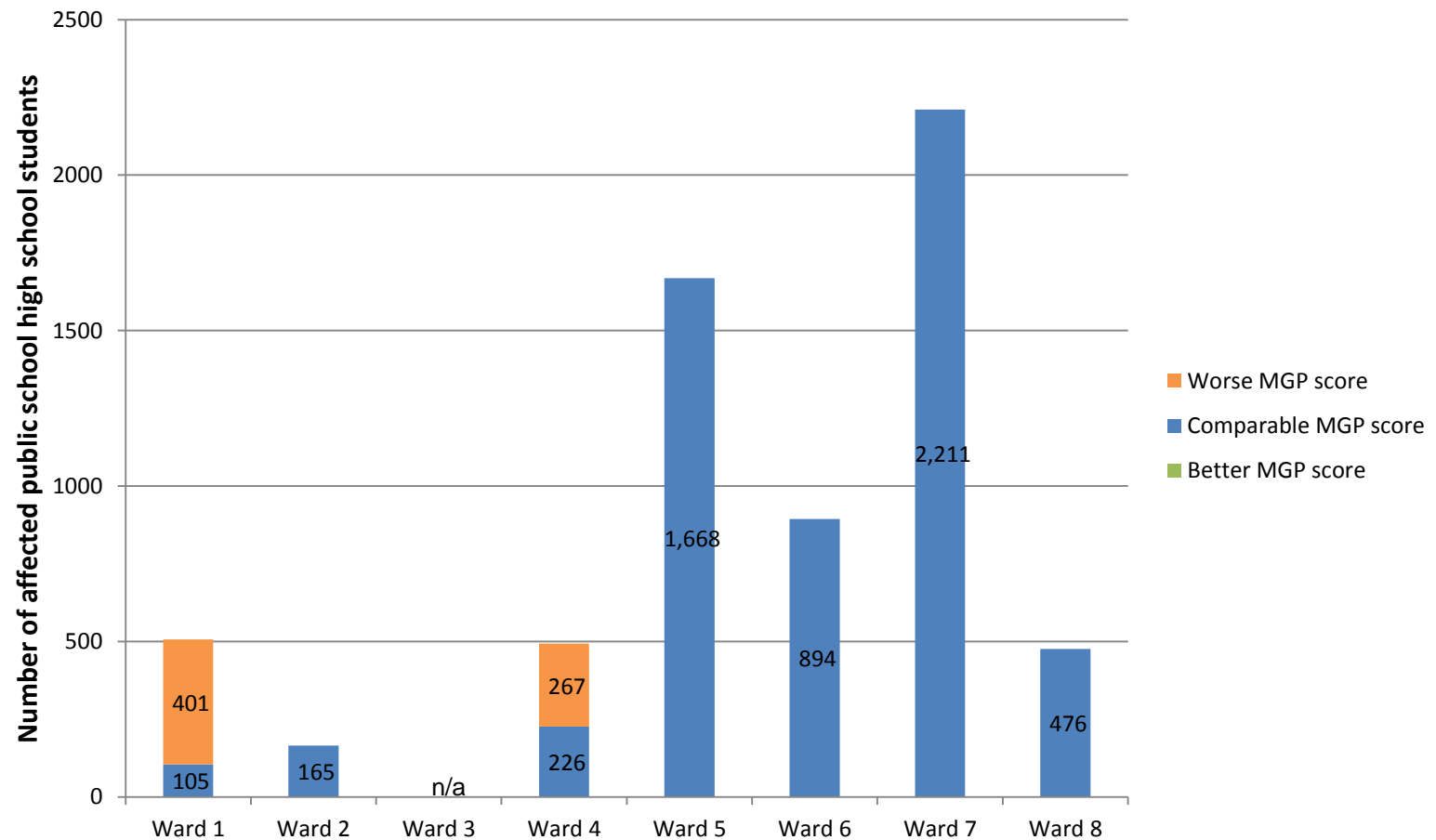


# Changes in Characteristic Impacts for Affected High School Students Citywide



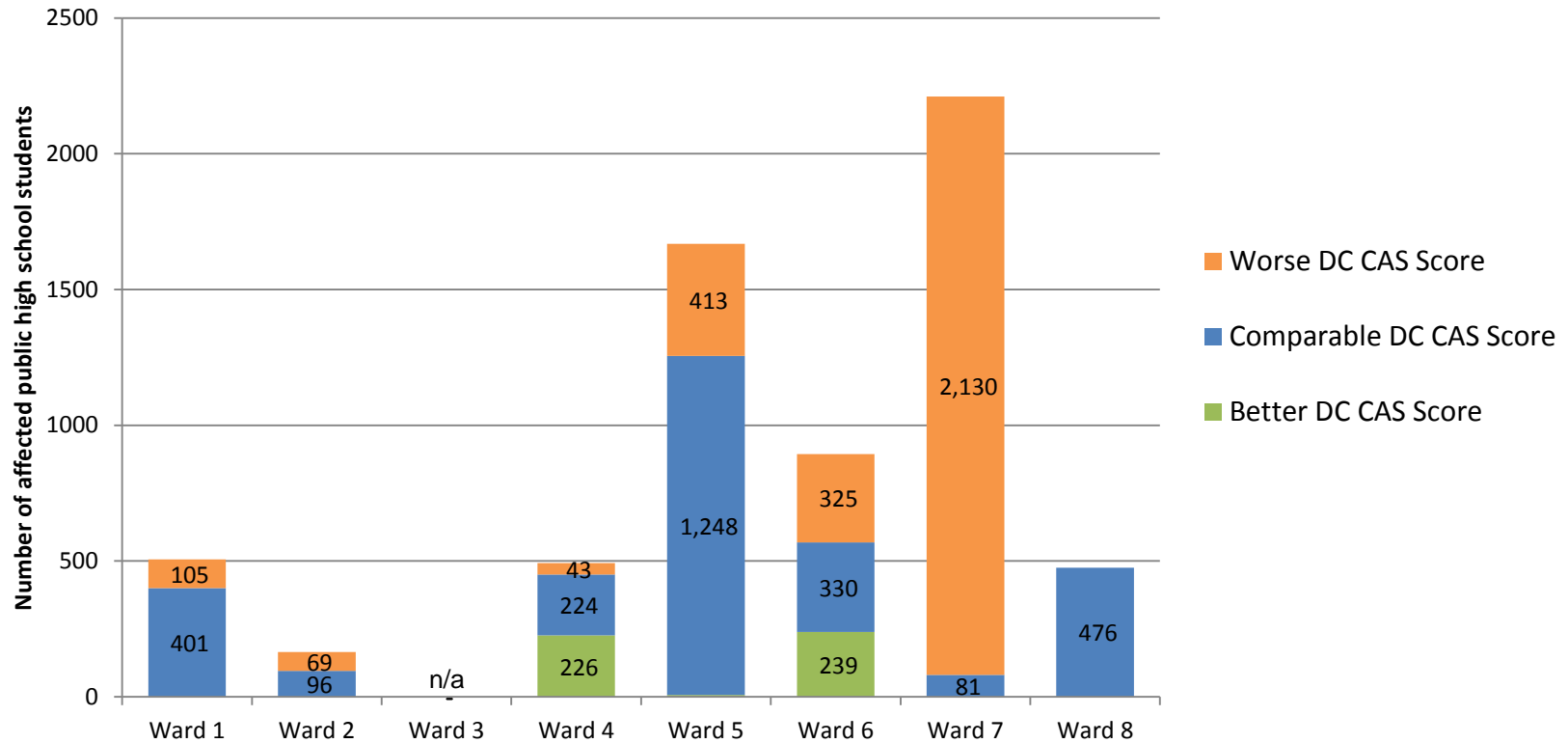
- 90% of affected high school students would be reassigned to a new school of right where the MGP and income diversity of the boundary would be comparable.
- 83% of affected high school students would be assigned to a new high school where the racial/ethnic diversity of the boundary would be comparable.
- 45% of affected high school students would be assigned to a new high school where the DC CAS test scores are in comparable quartiles, and another 48% would be assigned to where the test scores are in lower quartiles.

# Changes in MGP Scores for Affected High School Students



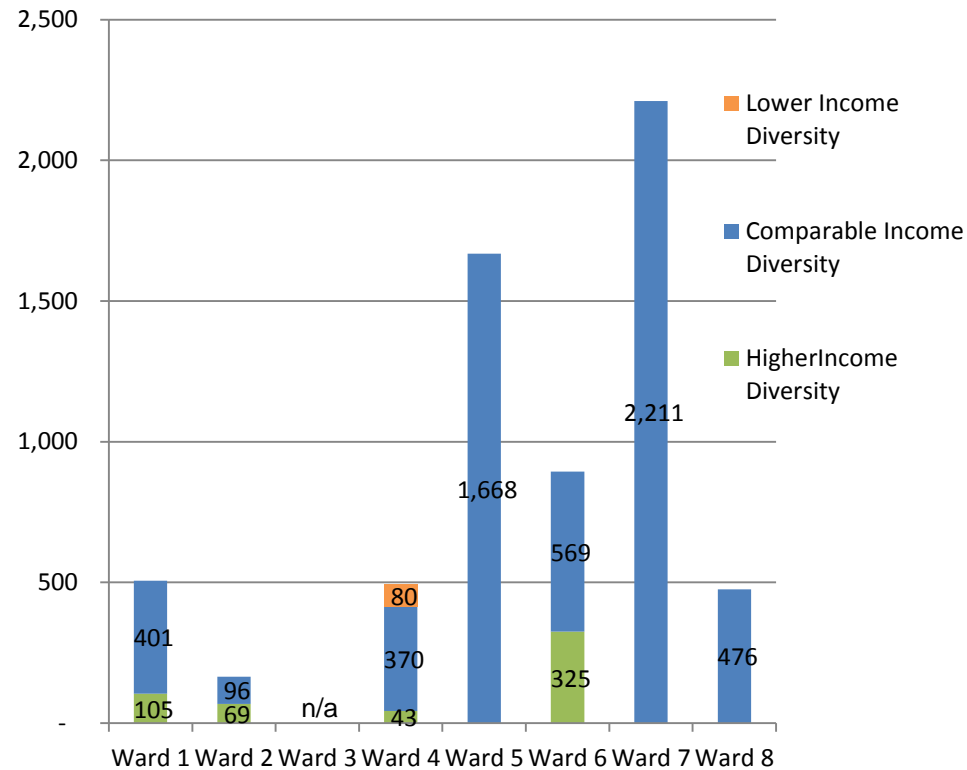
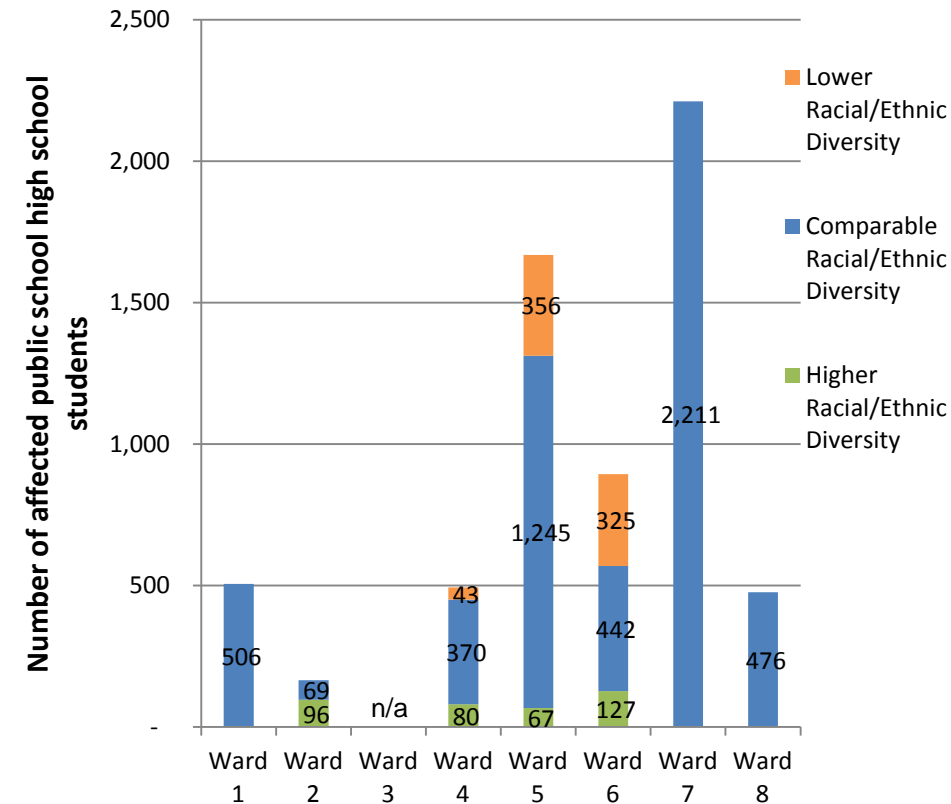
- Affected high school students living in Wards 2, 5, 6, 7, and 8 would be assigned to a new high school of right with a comparable MGP score.
- Affected high school students in Wards 1 and 4 would be assigned to a new school of right with a lower MGP score – these are students who have a right to Cardozo HS and Wilson HS would be rezoned to Roosevelt HS.

# Changes in DC CAS Scores for Affected High School Students



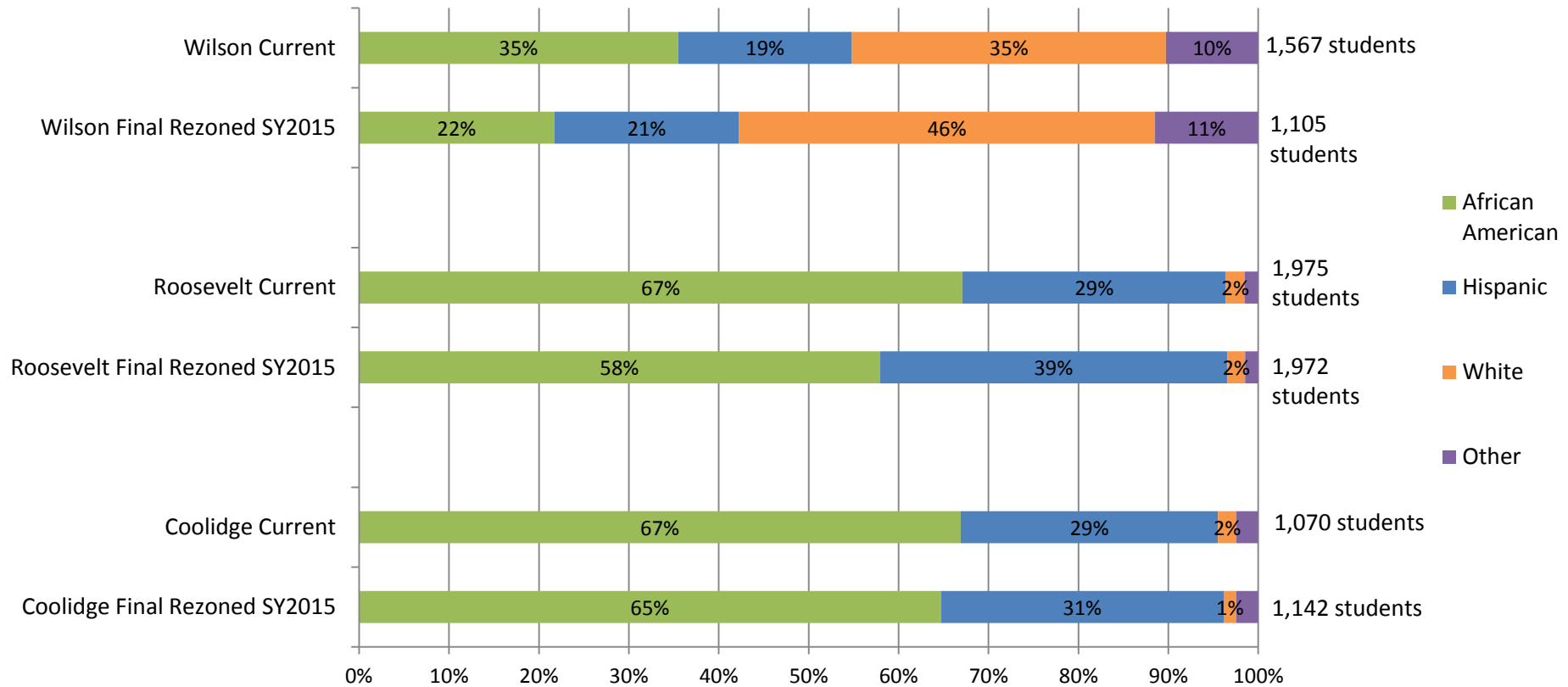
- Affected high school students living in Ward 7 would be assigned a new school of right that is in a lower DCCAS quartile tier than their current school of right.
  - This is driven primarily by students with current rights to Eastern HS and now being reassigned to either H.D. Woodson HS or Anacostia HS, as well as the former Spingarn students who had Eastern as one of their multiple rights and is reassigned to H.D. Woodson.
- Affected high school students in Wards 4 and 6 would be assigned to a new school of right in a higher DCCAS quartile – these are driven primarily by students who have a current right to Coolidge HS and now have a new right to Wilson HS; Dunbar HS and now have a new right to Eastern HS; and Roosevelt HS who now has a new right to Coolidge HS.

# Changes in Diversity for Affected High School Students



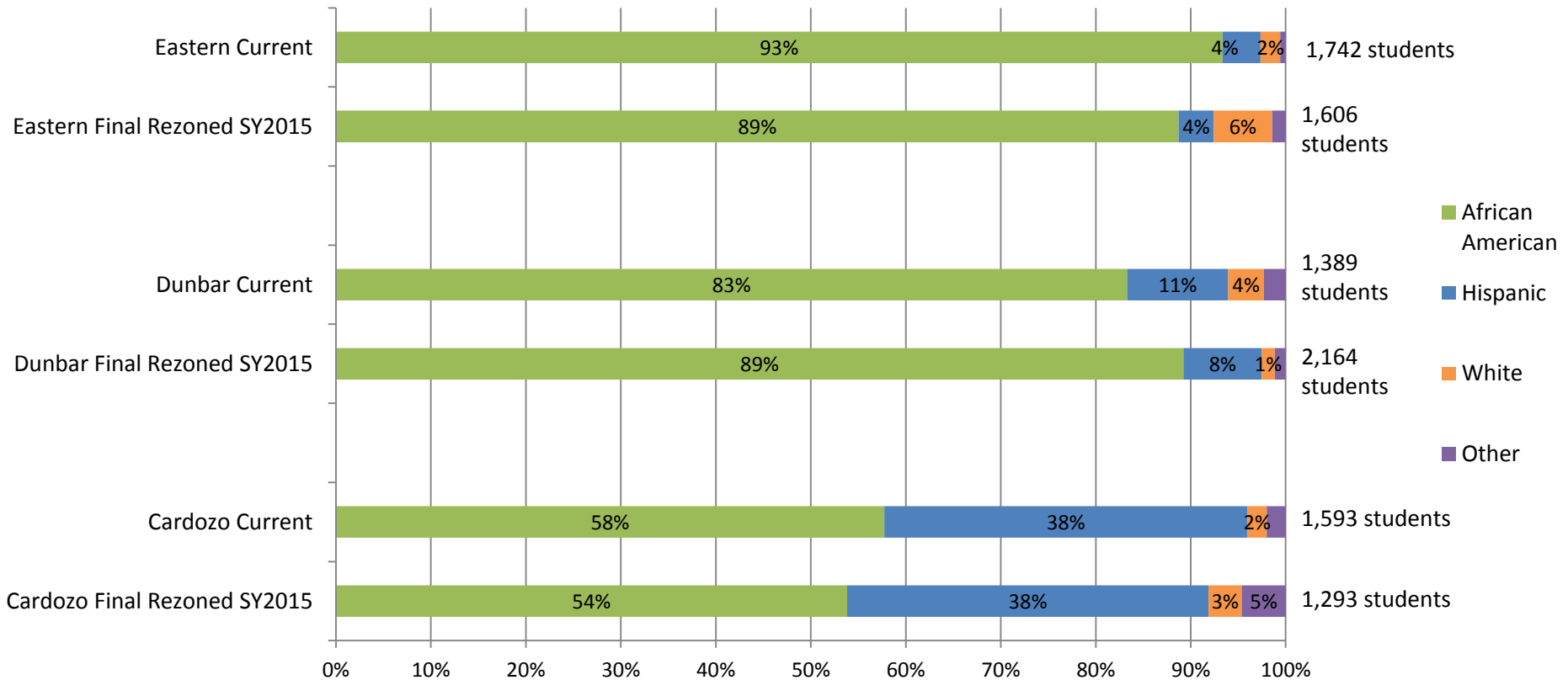
- 356 affected high school students in Ward 5 would be reassigned to a high school boundary with lower racial/ethnic diversity than they do currently. This is driven by high school students with a current right to Cardozo being reassigned to Dunbar.
- 325 affected high school students in Ward 6 would also be reassigned to a high school boundary with lower racial/ethnic diversity than they do currently. This is driven by students with a current school of right to Wilson being assigned to Eastern HS. While the racial diversity would decrease, the income diversity would increase for some of these Ward 6 students.

# Change in Proportion of All High School Students by Race/Ethnicity Living in Current and New High School Boundaries – Upper NW/NE



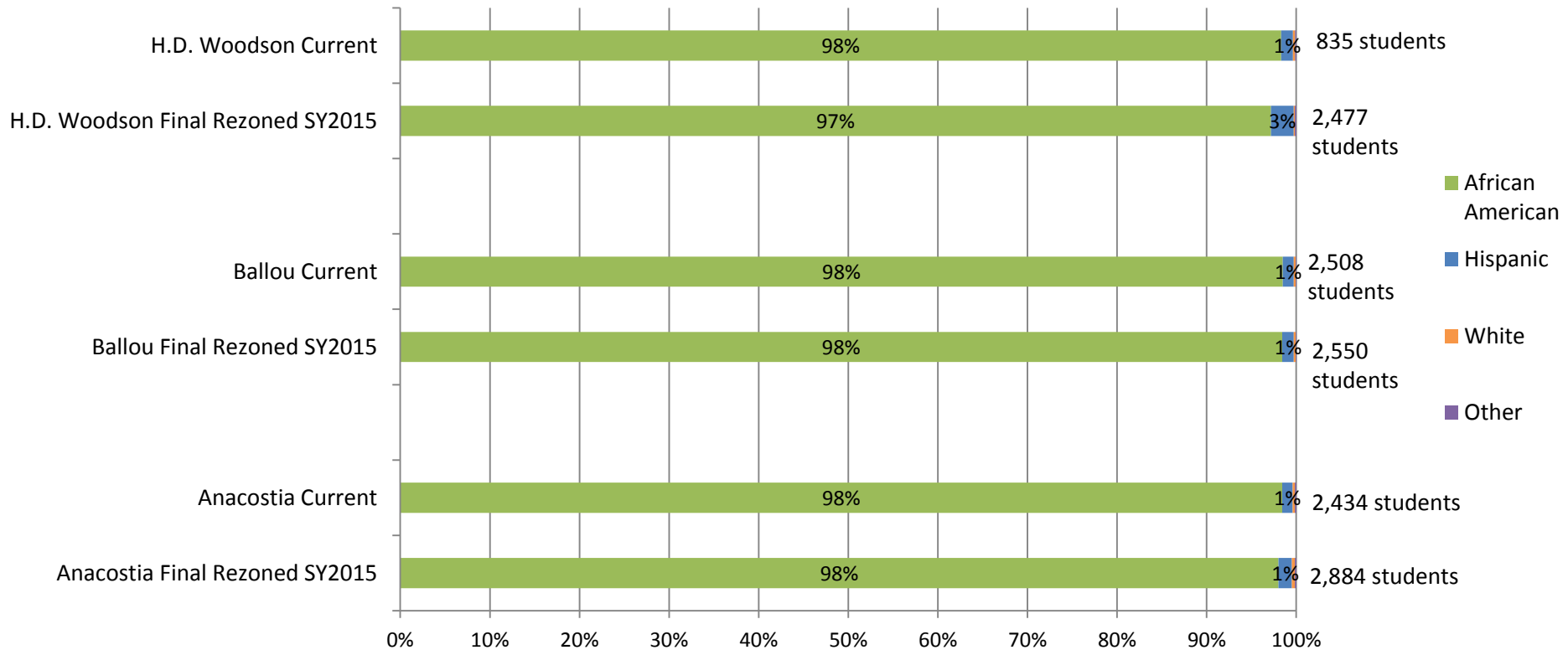
- This graphic displays the shares of ALL high school students living in the current and new high school boundaries by their race/ethnicity (not just affected students as the previous diversity analysis showed).
- The new Wilson boundary would have a greater proportion of white non-Hispanic students living in the new boundary compared to the current boundary (46% versus 35%, respectively), and consequently a lower share of African American non-Hispanic students (22% versus 35%, respectively).
- The new Roosevelt boundary would have a greater share of Hispanic students living in the boundary than they do currently (39% versus 29%, respectively).

# Change in Proportion of All High School Students by Race/Ethnicity Living in Current and New High School Boundaries – Center City



- This graphic displays the shares of ALL high school students living in the current and new high school boundaries by their race/ethnicity (not just affected students as the previous diversity analysis showed).
- The new Eastern boundary would have a greater portion of white non-Hispanic students living in it compared to the current boundary (6% versus 2%, respectively).
- Conversely, the new Dunbar boundary would have a smaller proportion of Hispanic students living in it than the current boundary (8% versus 11%, respectively).

# Change in Proportion of All High School Students by Race/Ethnicity Living in Current and New High School Boundaries – East End



- This graphic displays the shares of ALL high school students living in the current and new high school boundaries by their race/ethnicity (not just affected students as the previous diversity analysis showed).
- Due to the racial segregation of the Wards 7 and 8, the changes to the HD Woodson, Ballou, and Anacostia boundaries do not change the proportions of high school students race/ethnicity who live there.
- However, the changes to the feeder patterns results in an increase of 1,642 students to the H.D. Woodson boundary and 450 students to the Anacostia boundary.