

Impact Analysis of Draft Proposed Boundaries

June 2014

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

Purpose

- The Office of the Deputy Mayor for Education, with technical assistance by the 21st Century School Fund and the Urban Institute, analyzed the impact of the proposed 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 proposal were to be implemented today, regardless of whether a student is enrolled in their zoned DCPS school, without taking into account the proposed phase-in policies (future analysis will incorporate phase-in policies once they are finalized).
 - 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.
 - Once the proposal is final, DME and the technical team will analyze the impact on DCPS student enrollment.
- Most of the analysis is focused 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

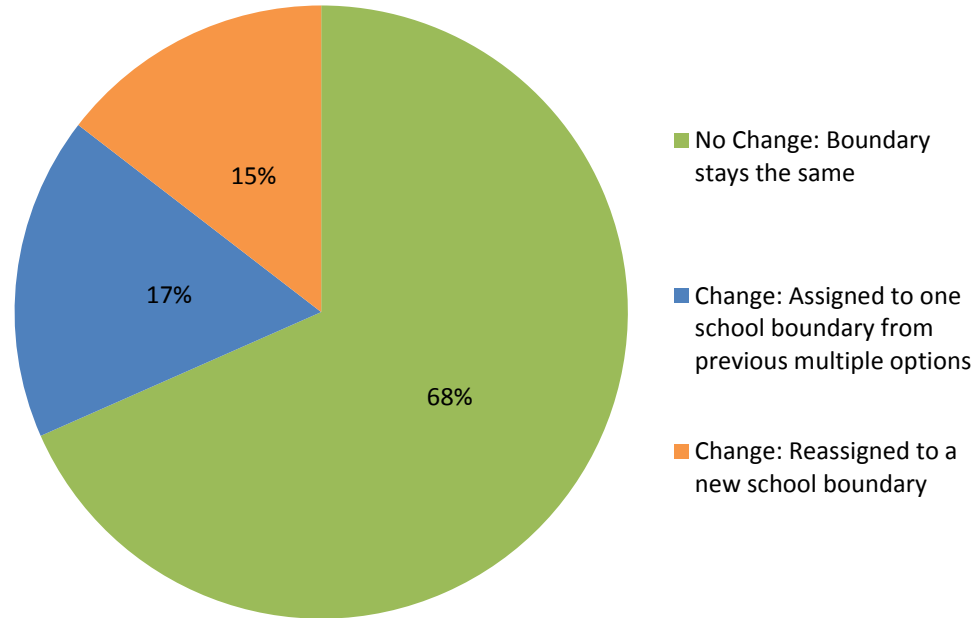
- The impact analysis is based on individual-level public school student data (DCPS and public charter students) from SY2013-14 provided by the Office of the State Superintendent of Education. The student-level data includes information about the student's demographics, grade, school attended, and address.
- 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 distances between each affected public school student's address and their current and proposed elementary school of right. If the difference in distances between the current and proposed schools 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 proposed elementary school of right for the affected elementary school students. If there was a statistically significant difference in the positive direction, then the student had access to a school with a better MGP score. If the difference was statistically significant and negative, then the student had access to a school of right with a worse MGP score. No statistically significant change meant the MGP scores were comparable.

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, sorted those average test scores into quartiles, and identified four tiers. If the new proposed school of right was in a higher DC CAS tier 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 tier, 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 tier as the current school of current, the students were categorized as having comparable access. Students who currently have access to multiple schools of right were assigned the DC CAS quartile tier that was the highest for their current boundary.
- **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 proposed elementary school boundary. The index indicates whether the students living in the proposed 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 proposed 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). The at-risk measures 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 proposed elementary school boundary has a higher, lower, or comparable level of income diversity than the student's current boundary.

Impact of Proposed Elementary School Boundaries

Impact of Draft Recommended Elementary School Boundary Changes, Citywide

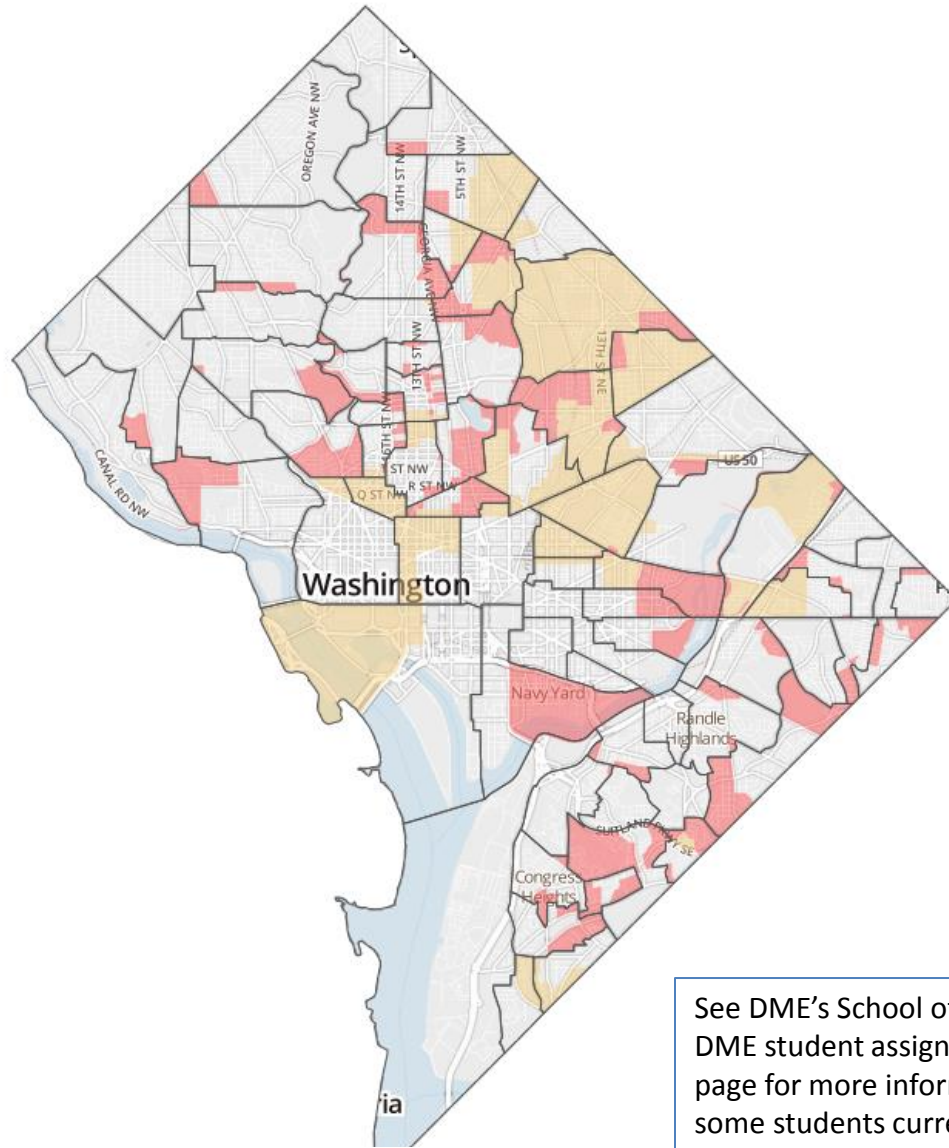


Source: 2013-14 student-level from OSSE, data analyzed by the Urban Institute n=46,052

- 68% of all public elementary school students' rights would not be affected by the proposal
- 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 Draft Recommended Elementary School Boundary Changes Propose a Reduction or Change in Rights

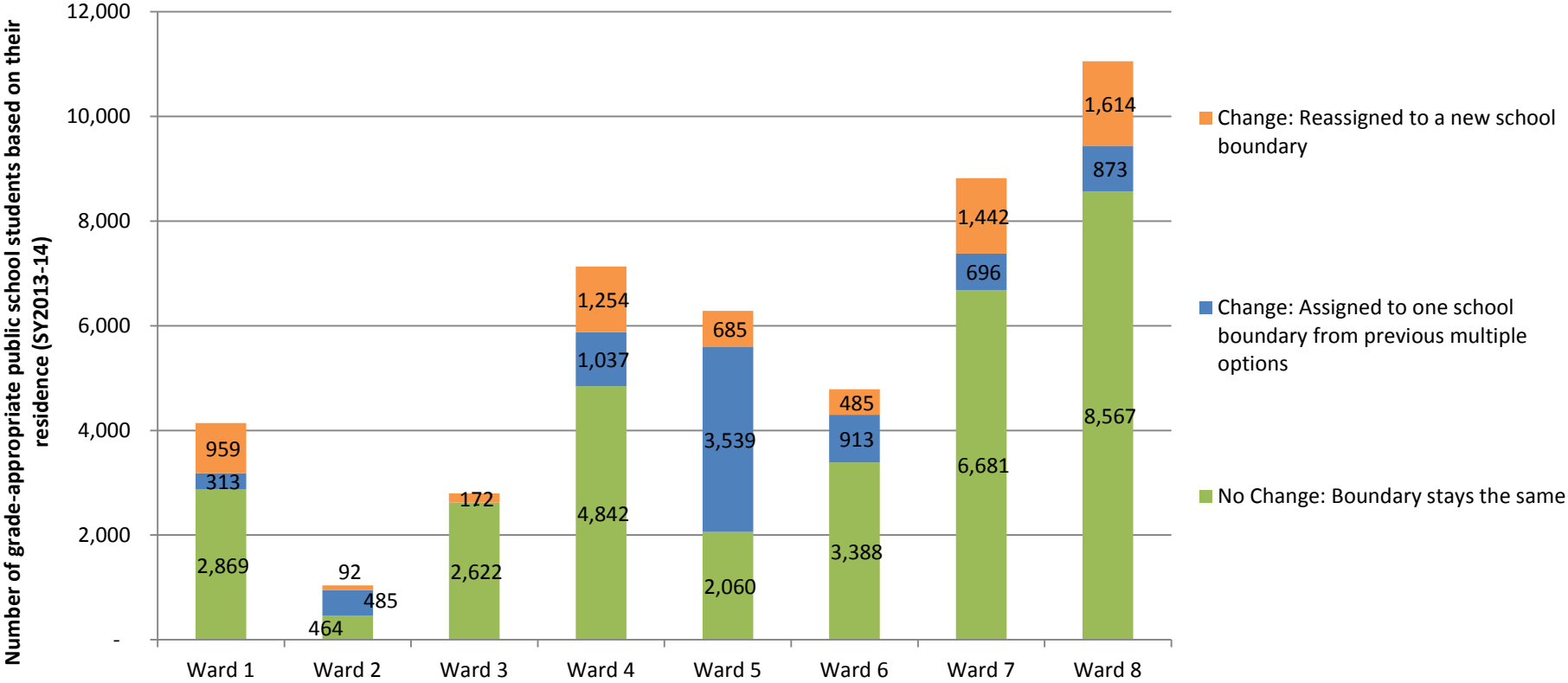


□ Proposed boundaries ■ Area reassigned to one of its present options ■ Area reassigned to a different school

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

Proposed 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.

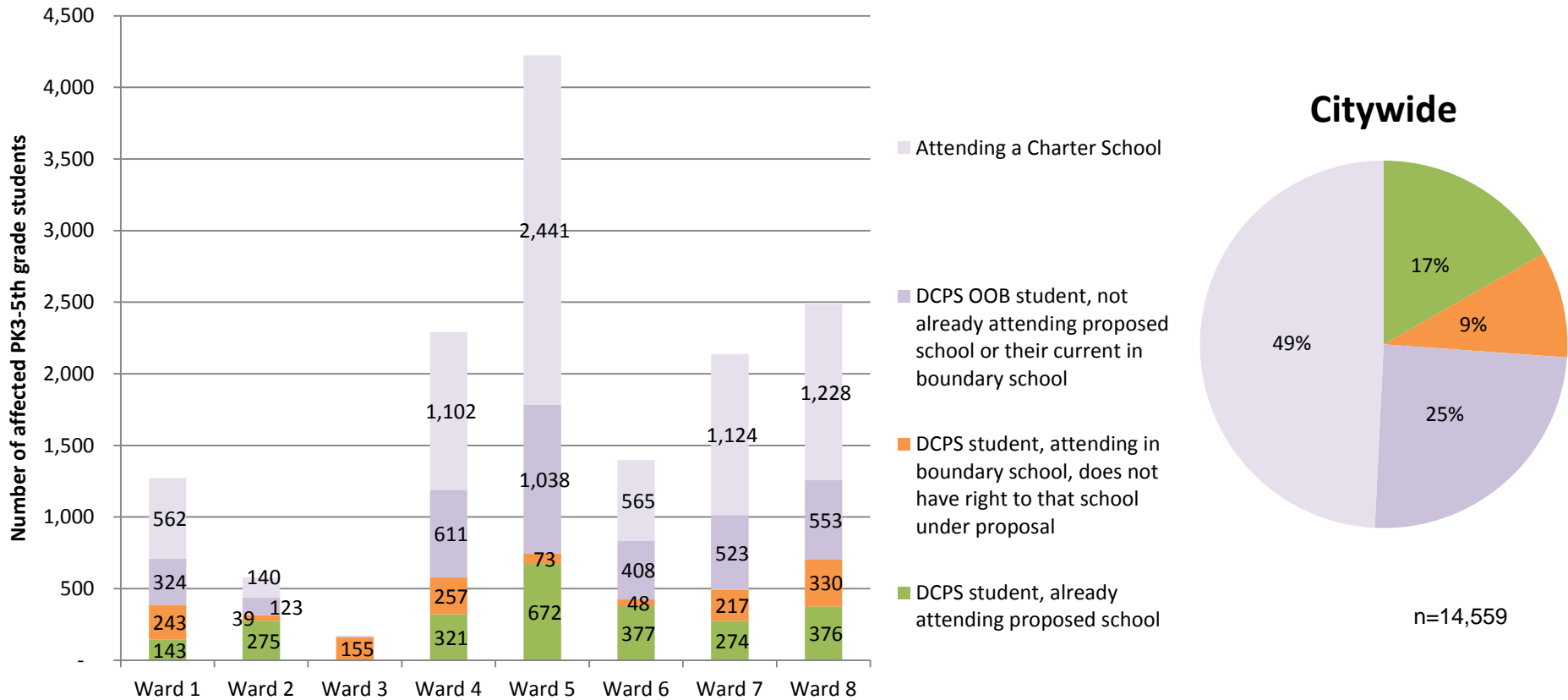
Impact of Draft Recommended Elementary School Boundary Changes by Ward, 2013-14



- 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

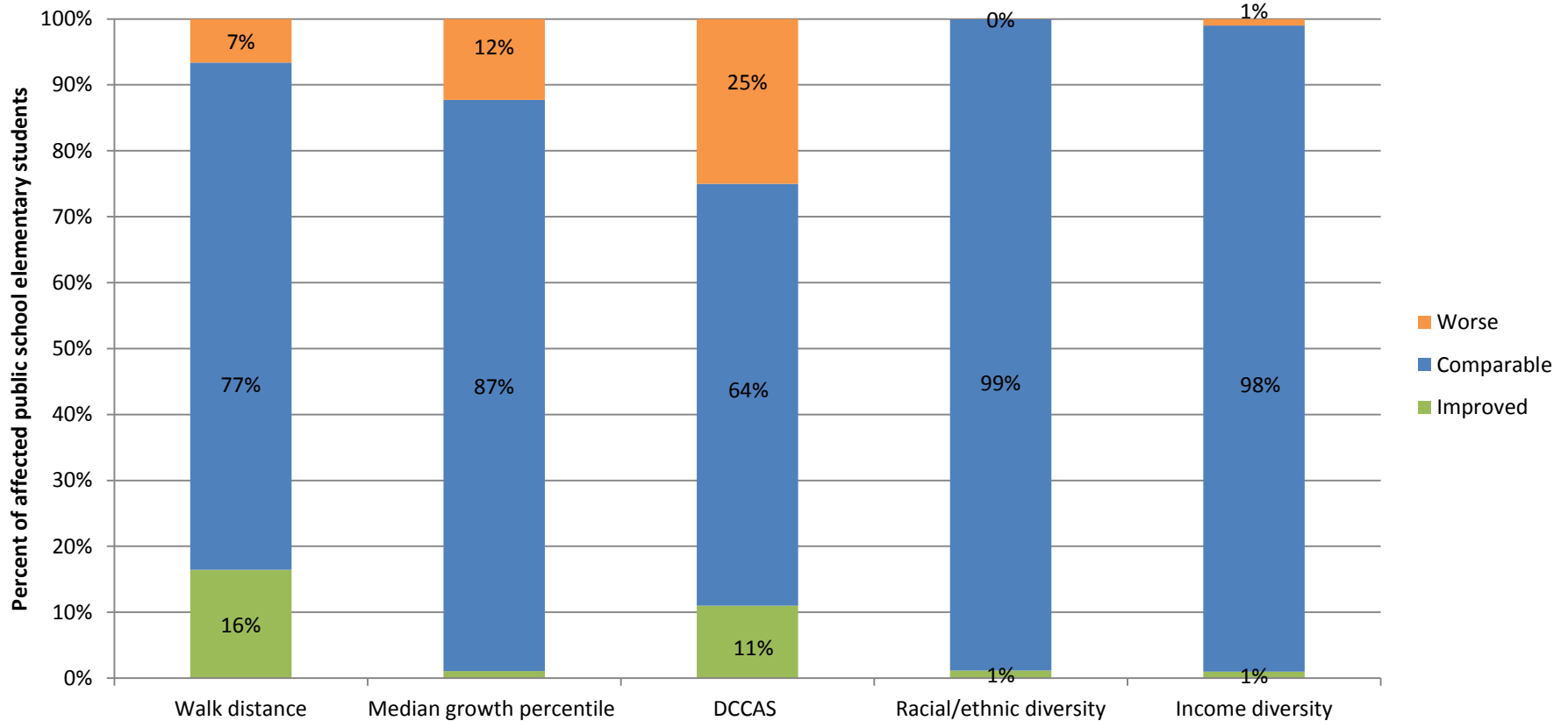
Proposed boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school, shall maintain in-boundary rights at their current in-boundary school until they complete that school.

Distribution of Elementary School Students Affected by Draft Recommended Elementary School Boundary Changes



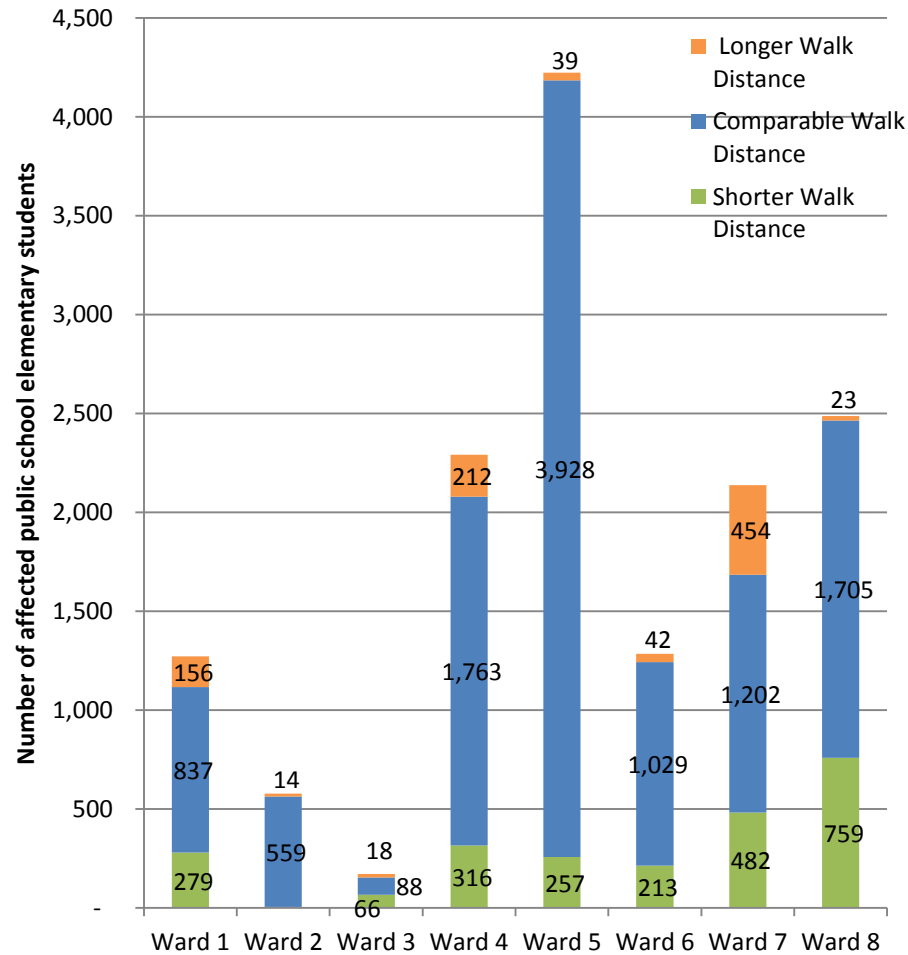
- The draft recommended proposal would assign 2,443 DCPS elementary school students to the school that they are already attending (17% of all affected elementary school students).
- Another 1,362 DCPS students (9% of all affected elementary school students) who are currently attending in boundary would lose their right to their current in boundary school.
- Over 600 affected elementary school students in Ward 5 would be reassigned 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 Draft Recommended 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.
- 16% of all affected elementary school students would have a shorter walk distance under the proposed 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

Changes in Walk Distances for Affected Elementary School Students for Draft Recommended Boundaries

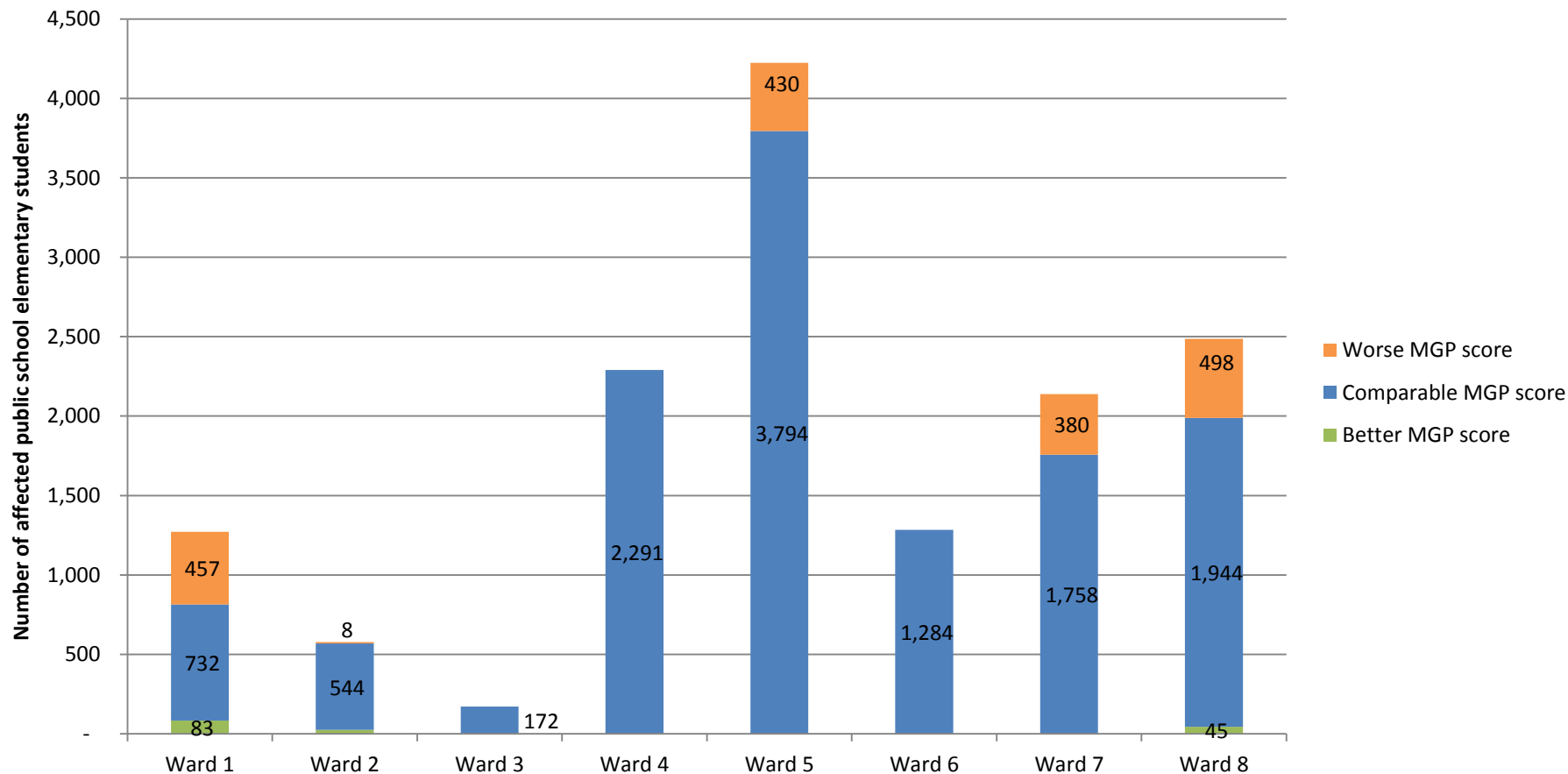


Distance between home and in boundary DCPS elementary school (miles), SY2013-14

Ward	Current Boundaries			Proposed Boundaries, June 2014		
	25th Percentile	50th Percentile (Average)	75th Percentile	25th Percentile	50th Percentile (Average)	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	0.39	0.49
Ward 3	0.37	0.60	0.78	0.37	0.59	0.78
Ward 4	0.27	0.46	0.61	0.28	0.46	0.58
Ward 5	0.38	0.60	0.76	0.37	0.58	0.76
Ward 6	0.23	0.38	0.49	0.23	0.39	0.49
Ward 7	0.33	0.53	0.69	0.32	0.53	0.67
Ward 8	0.35	0.51	0.64	0.32	0.48	0.60

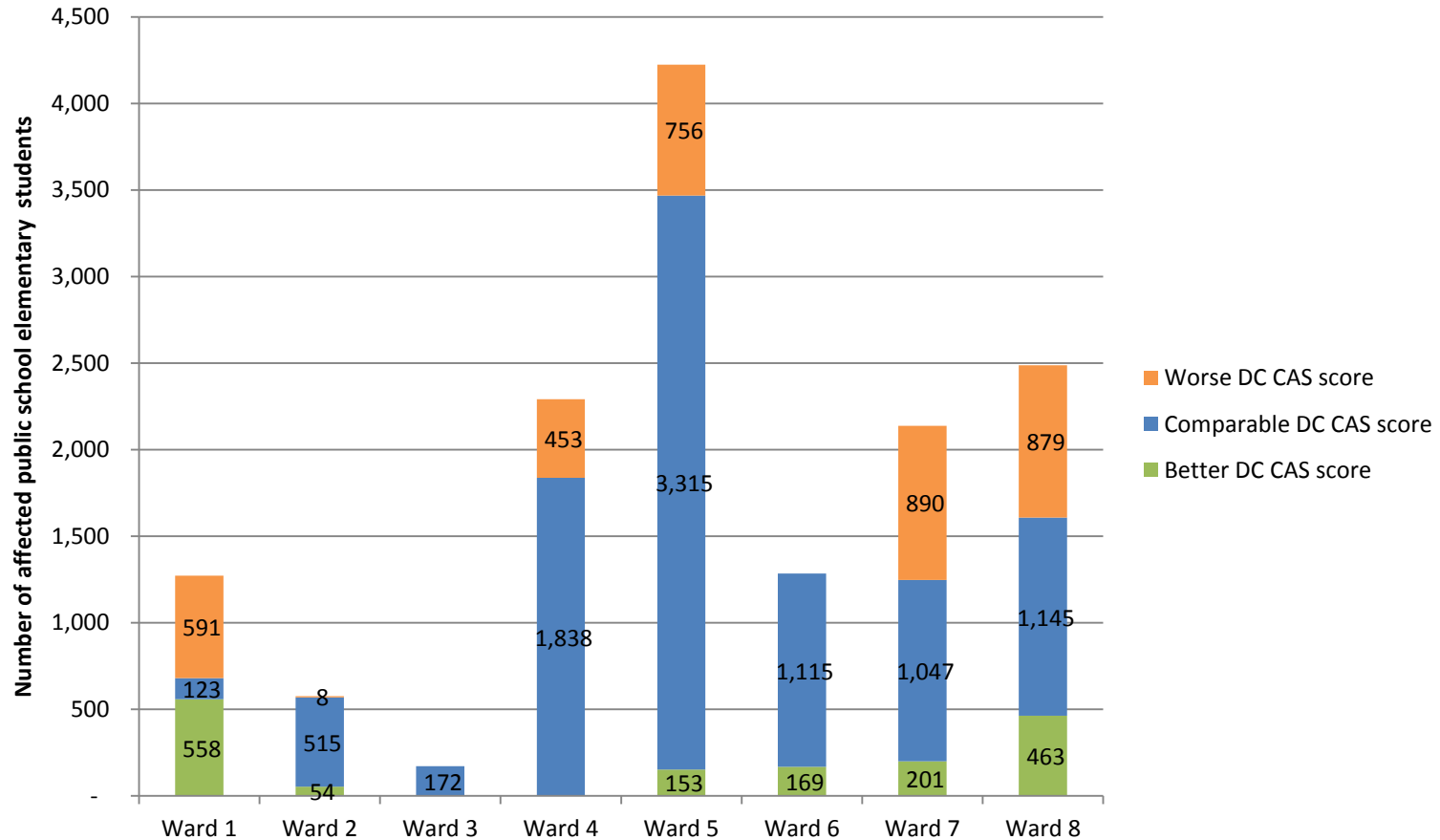
- The measure for a change in distance is an increase or decrease of at least two tenths of a mile (about two blocks).
- 759 affected Ward 8 and 482 Ward 7 elementary school students would have a shorter walk distance.
- Alternatively, 454 Ward 7 and 212 Ward 4 elementary students would have a longer walk distance.

Changes in MGP Scores for Affected Elementary School Students for Draft Recommended Boundaries



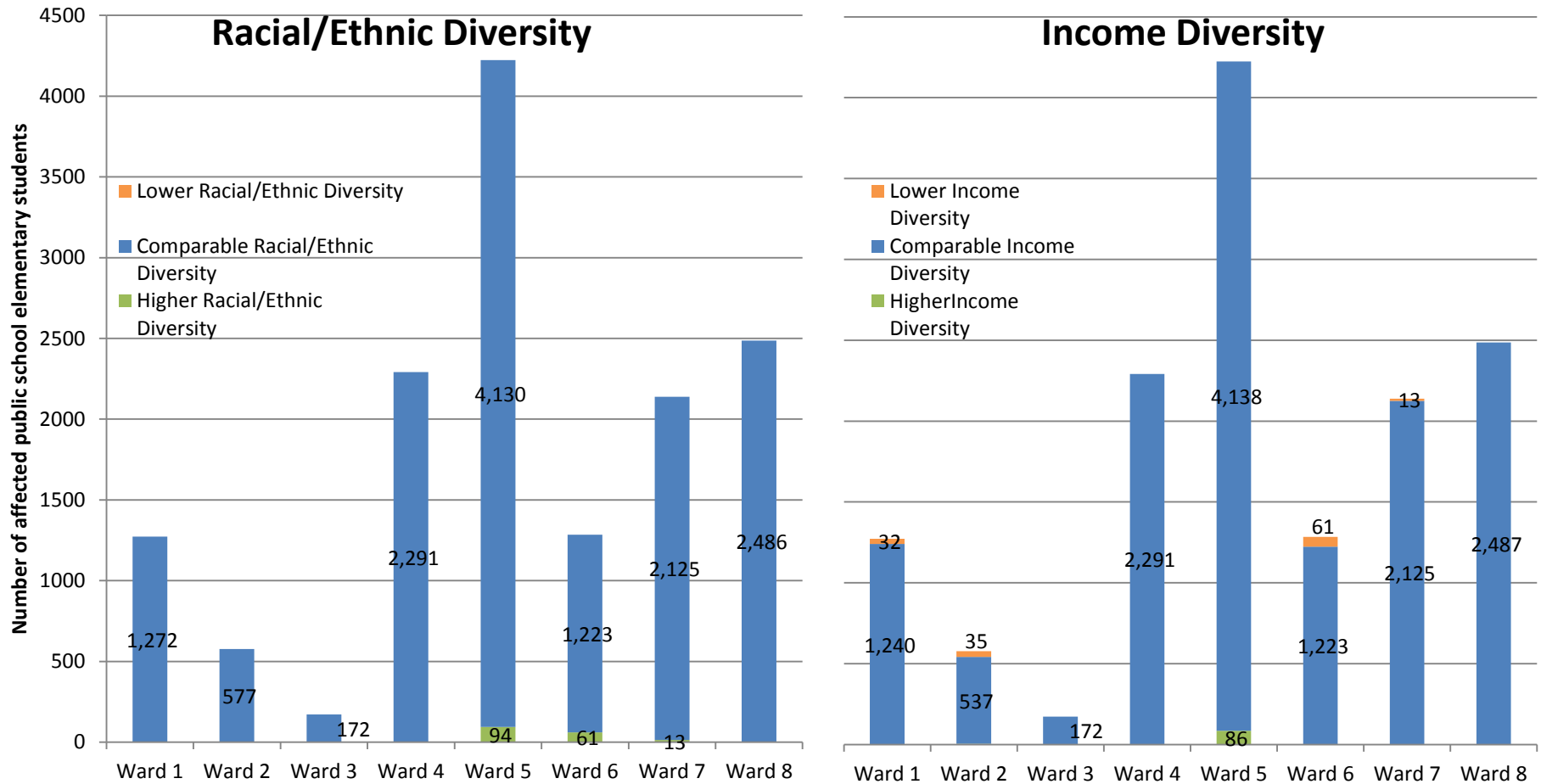
- Almost all of the all affected elementary students (87%) would be reassigned to an elementary school with a similar MGP score.
- Affected elementary students in Wards 1, 5, 7 and 8 would have the largest number of students who are assigned to schools with lower MGP scores than they are currently assigned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

Changes in DC CAS Scores for Affected Elementary School Students for Draft Recommended 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 5, 7 and 8 would have the greatest number of students who would have the right to attend a school with DCCAS score that is in a lower quartile tier than they currently have a right to.

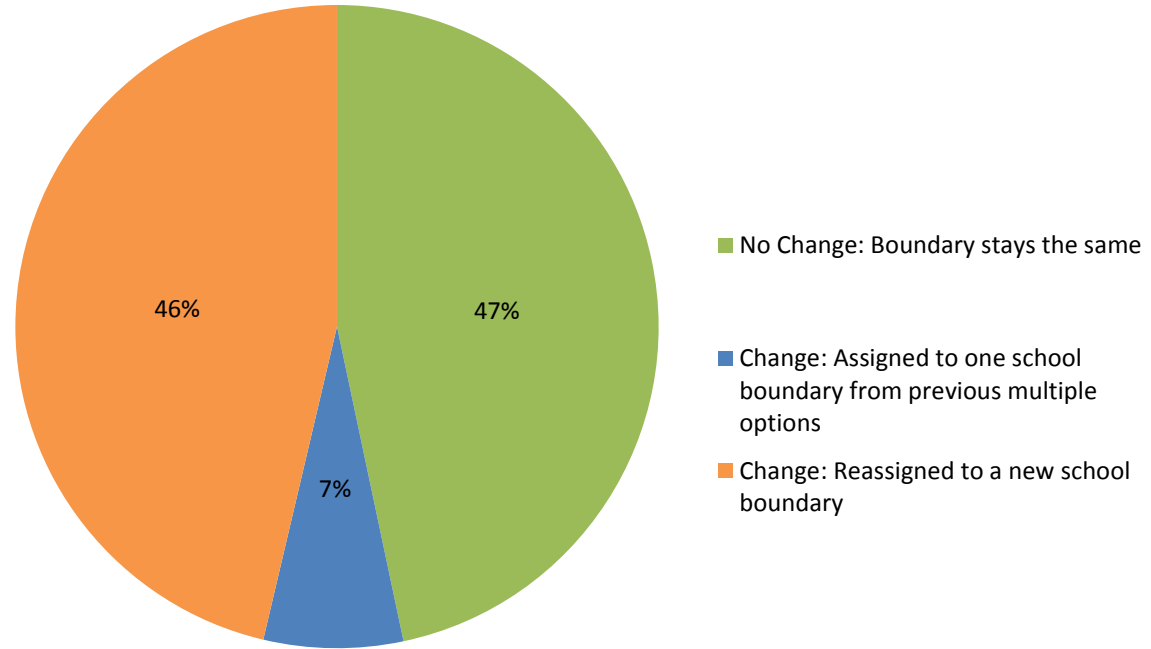
Changes in Diversity for Affected Elementary School Students in Draft Recommended Boundaries



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

Impact of Proposed Middle School Boundaries

Impact of Draft Recommended Middle School Boundary Changes, Citywide 2013-14



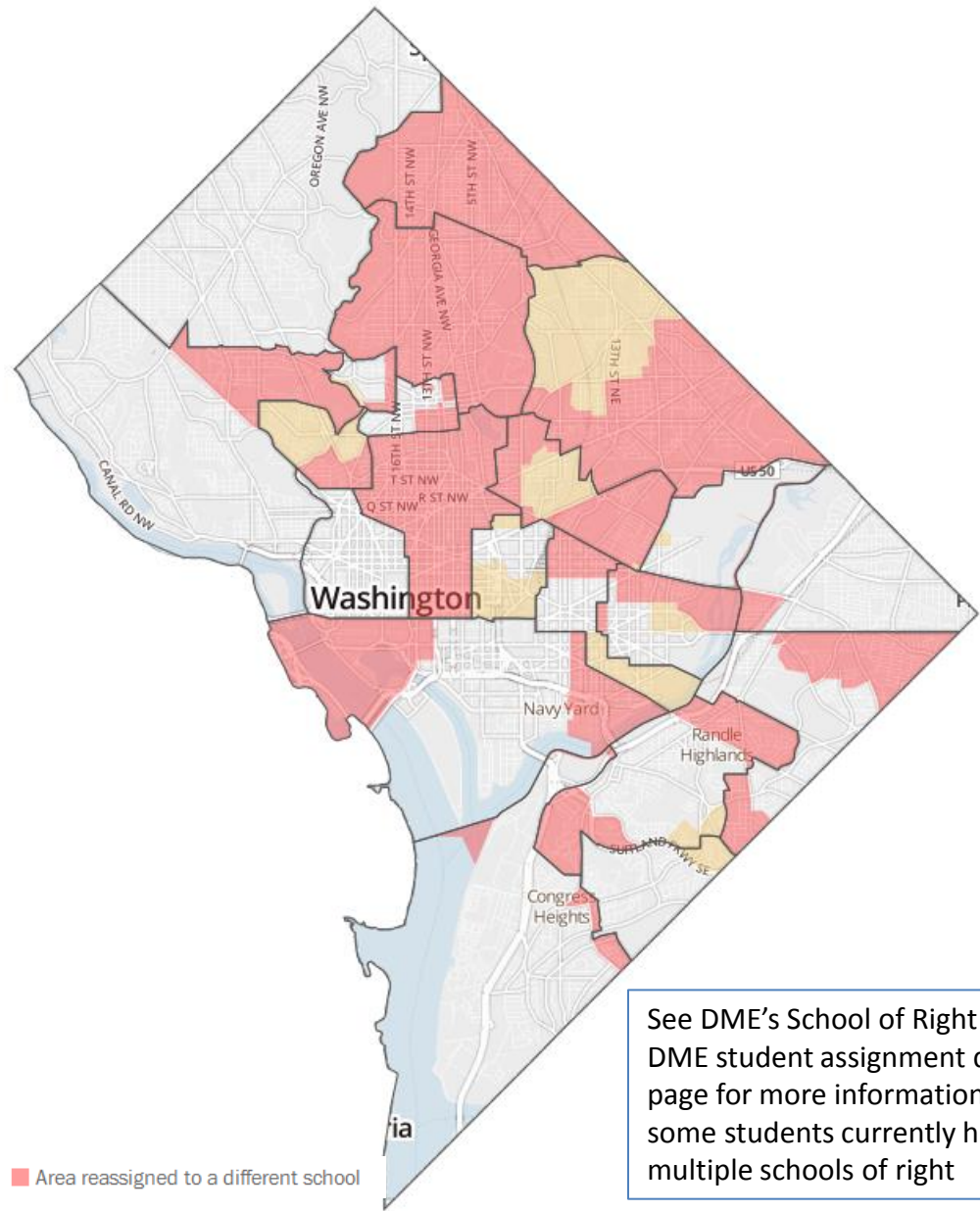
n=13,271

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

- 47% of all public middle school students' rights would not be affected by the proposal
- 7% would be assigned to one of multiple right options
- 46% would be reassigned to a different school

Proposed 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.

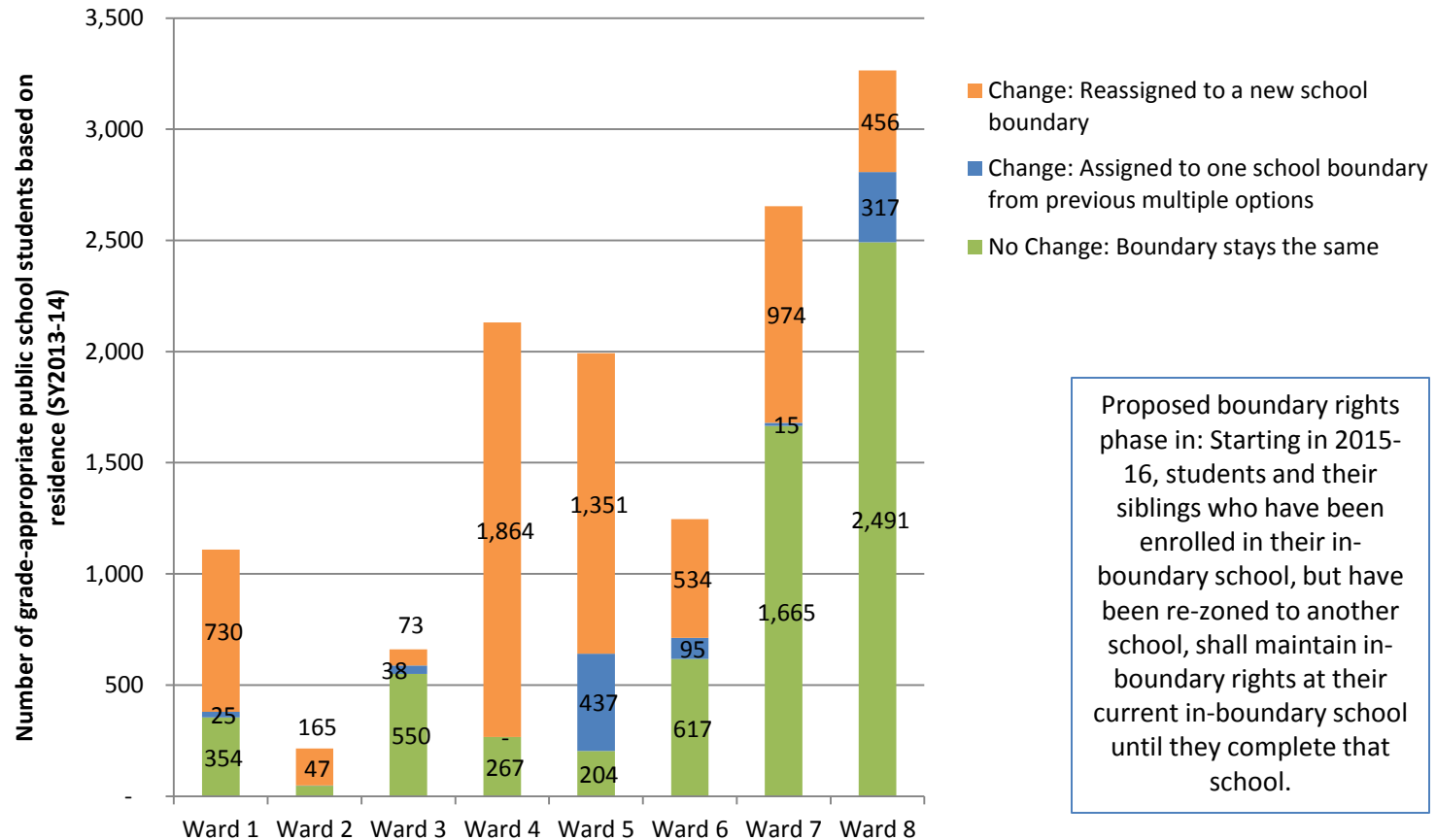
Areas of the City Where Draft Recommended Middle School Boundary Changes Propose a Reduction or Change in Rights



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

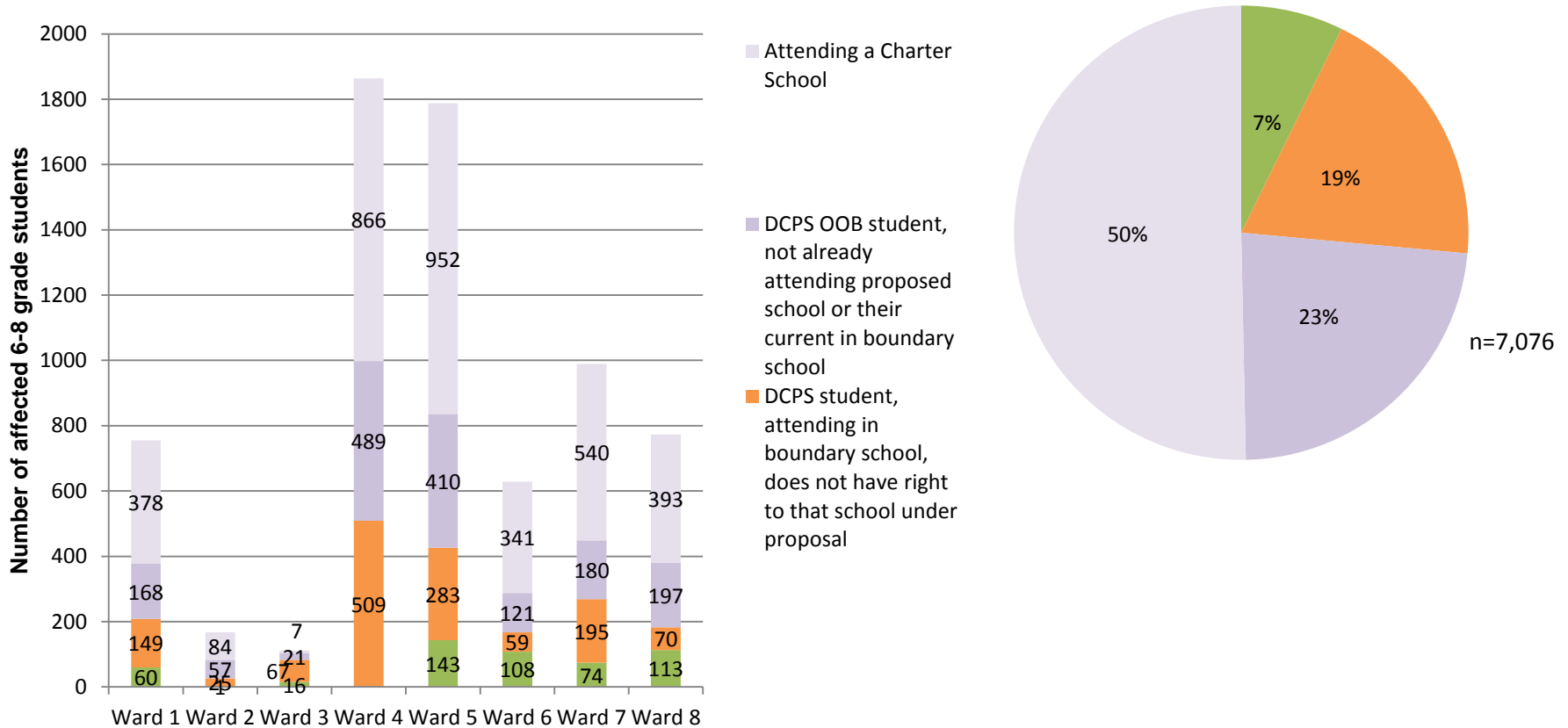
Proposed boundary rights phase in: Starting in 2015-16, students and their siblings who have been enrolled in their in-boundary school, but have been re-zoned to another school shall maintain in-boundary rights at their current in-boundary school until they complete that school.

Impact of Draft Recommended Middle School Boundary Changes by Ward, 2013-14



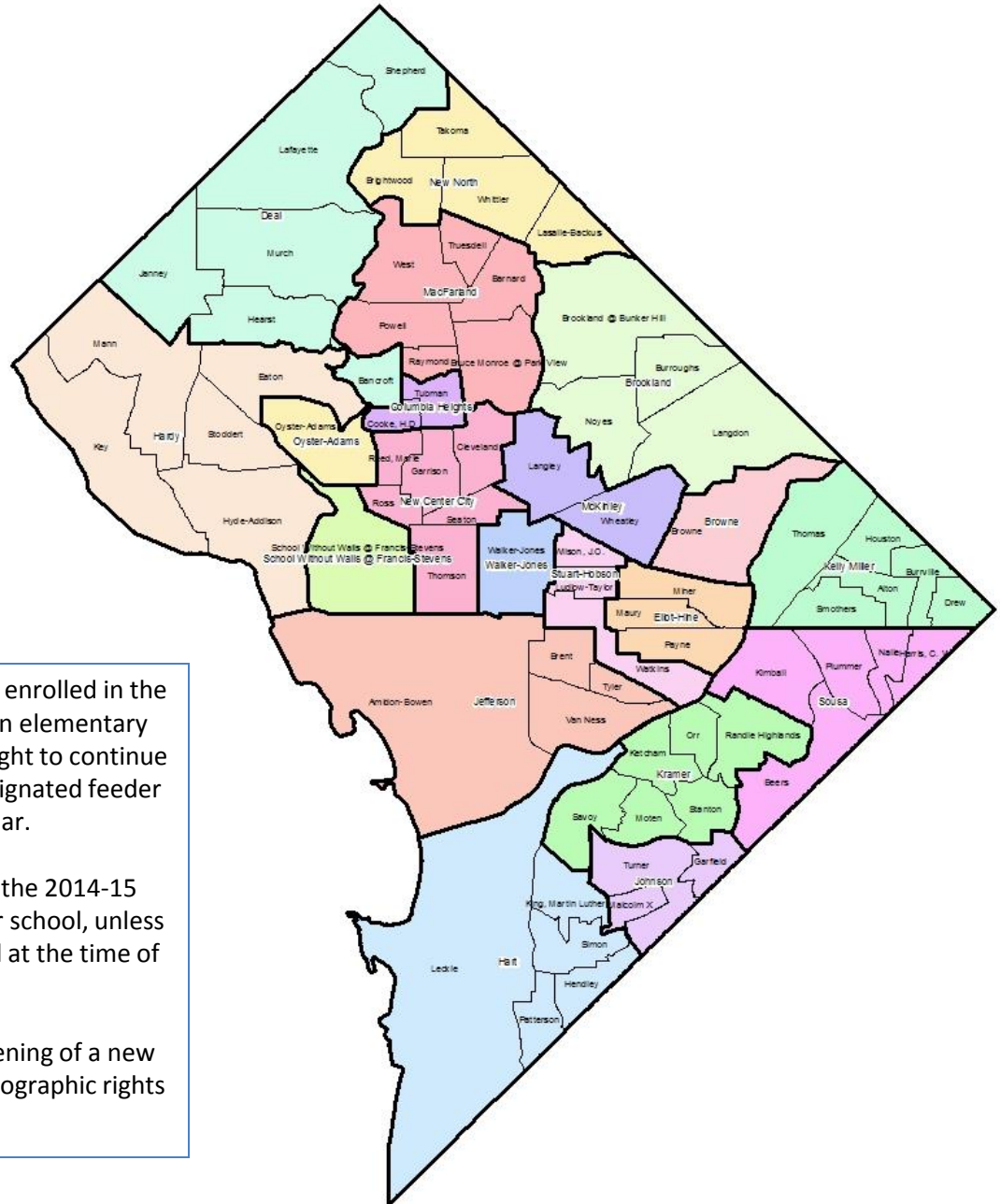
- Ward 4 would have the greatest number of middle school public students assigned to a new school of right because the proposal converts education campuses to elementary schools and would open a new North MS and new MacFarland MS in Ward 4
- Ward 5 would also have a greater number of middle school students assigned to a new school of right because of the proposed opening of Brookland MS and the new North MS

Distribution of Middle School Students Affected by Draft Recommended Middle School Boundary Changes



- The proposal would assign 515 DCPS middle school students to the school that they are already attending (7% of DCPS middle school affected students).
- Another 1,357 DCPS students (19% of DCPS middle school affected students) who are currently attending in boundary would lose their right to their current in boundary school.
- The greatest number of affected students losing their in boundary right where they are currently attending is in Ward 4 (509 students) because they are proposed to attend a new North MS or opened MacFarland MS.

How the Proposed Elementary School Feeder Patterns Result in Middle School Boundaries

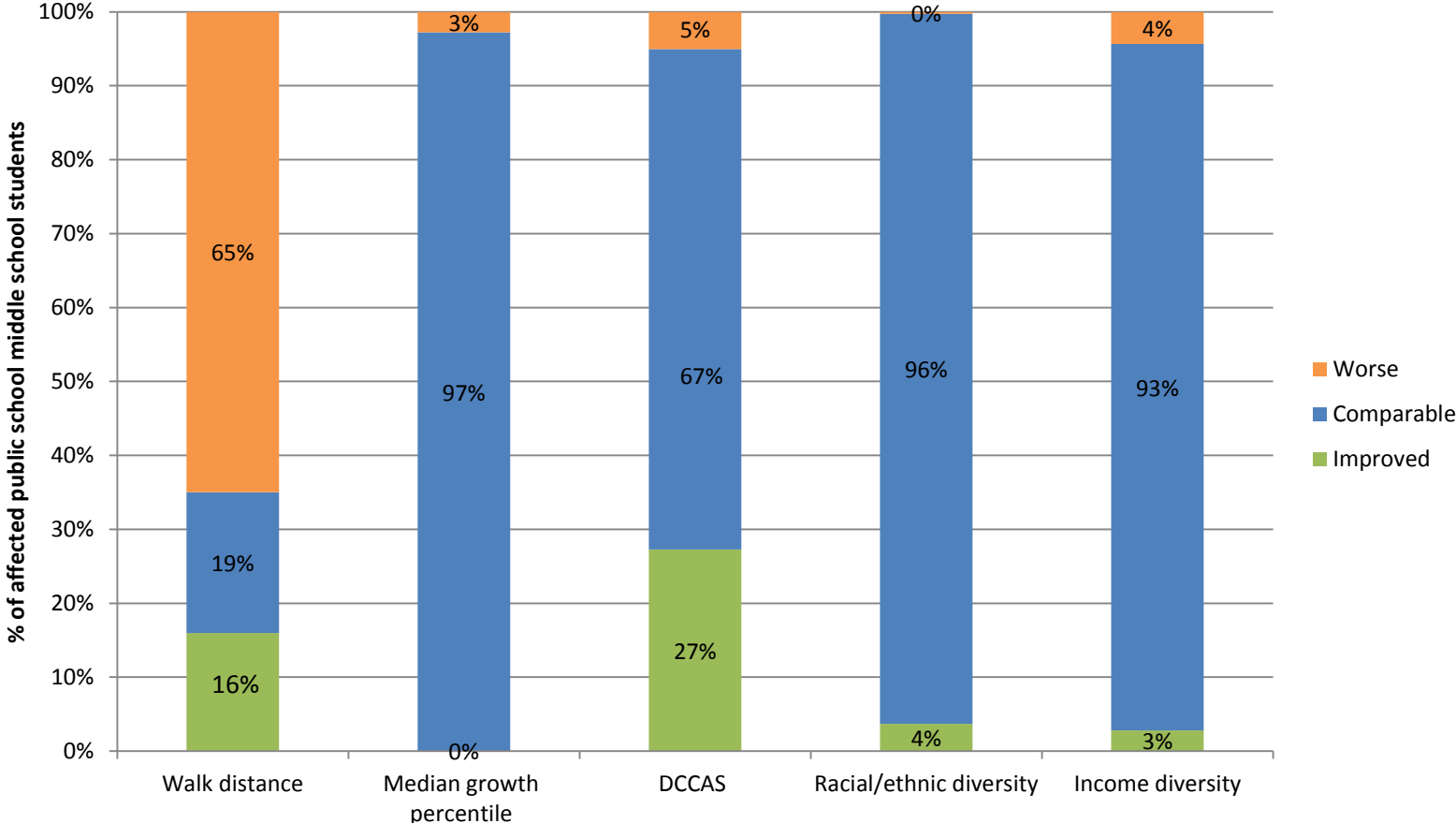


Proposed geographic rights phase in: Students who are enrolled in the 3rd through 5th grade for the 2014-15 school year at an elementary school whose feeder pathway changes shall have the right to continue to their former destination school OR to the newly designated feeder pattern beginning in the 2015-16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

Students who are in the PK3 through 2nd 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.

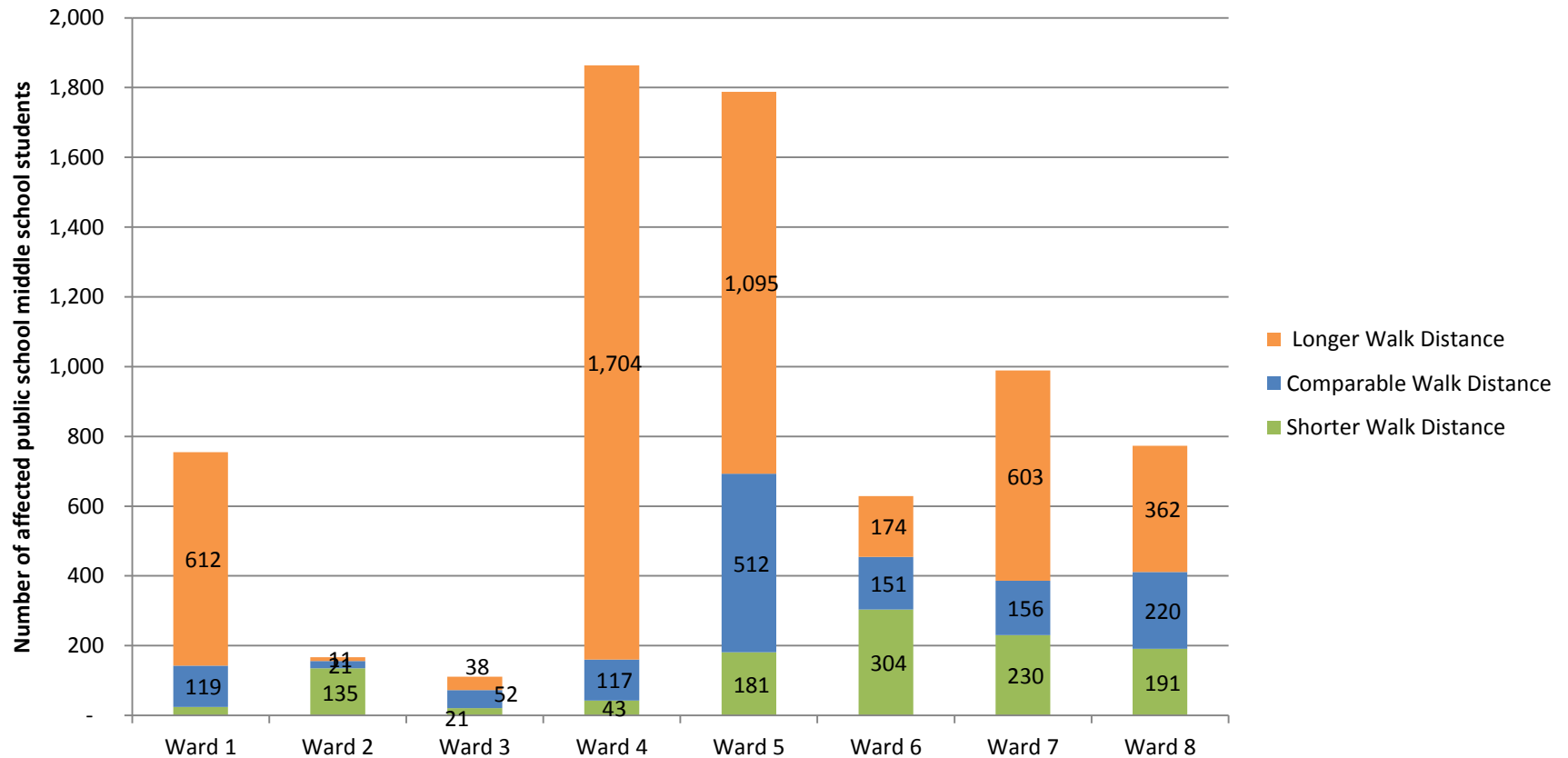
Students whose new feeder pathway relies on the opening of a new school shall retain their current feeder pathway and geographic rights until the new school is open.

Changes in Characteristic Impacts for Affected Middle School Students Citywide



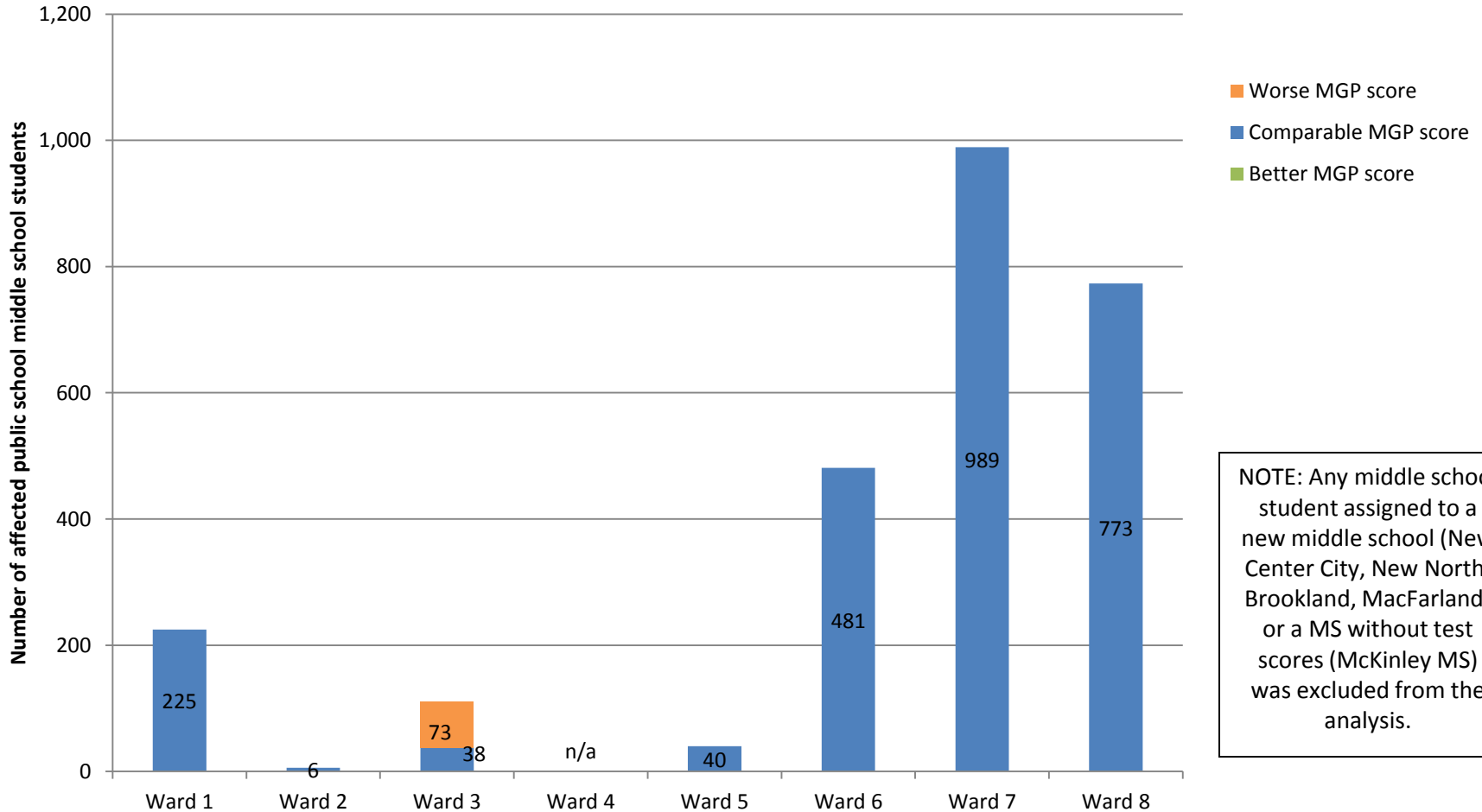
- For most measures, affected middle school students on average would be reassigned to a school that is comparable to their current school or boundary.
- Walk distance is the exception where 16% of the affected middle school students would have a shorter walk distance than they currently have and another 65% would have a longer walk distance. This is because the proposal is to convert education campuses to elementary schools and open three new middle schools.

Changes in Walk Distances for Affected Middle School Students for Draft Preliminary Boundaries



- The measure for a change in 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 4 and 5 would experience an increase in their walk distance; however, this is mainly due to the new middle schools being proposed (Brookland and MacFarland)
- Alternatively, affected middle school students in Wards 5, 6, 7 and 8 would experience a shorter walk distance to their proposed middle school.

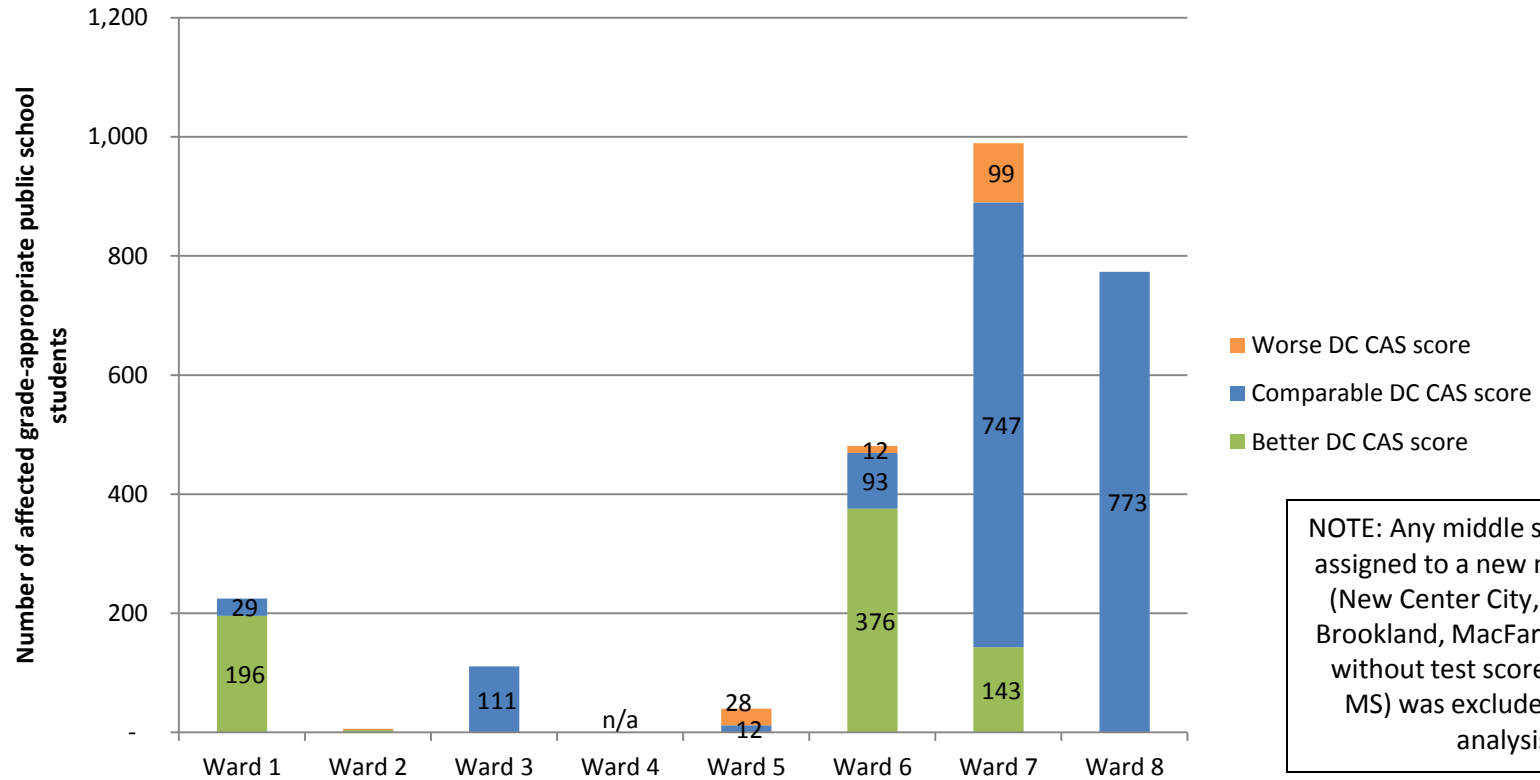
Changes in MGP Scores for Affected Middle School Students



NOTE: Any middle school student assigned to a new middle school (New Center City, New North, Brookland, MacFarland) 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.

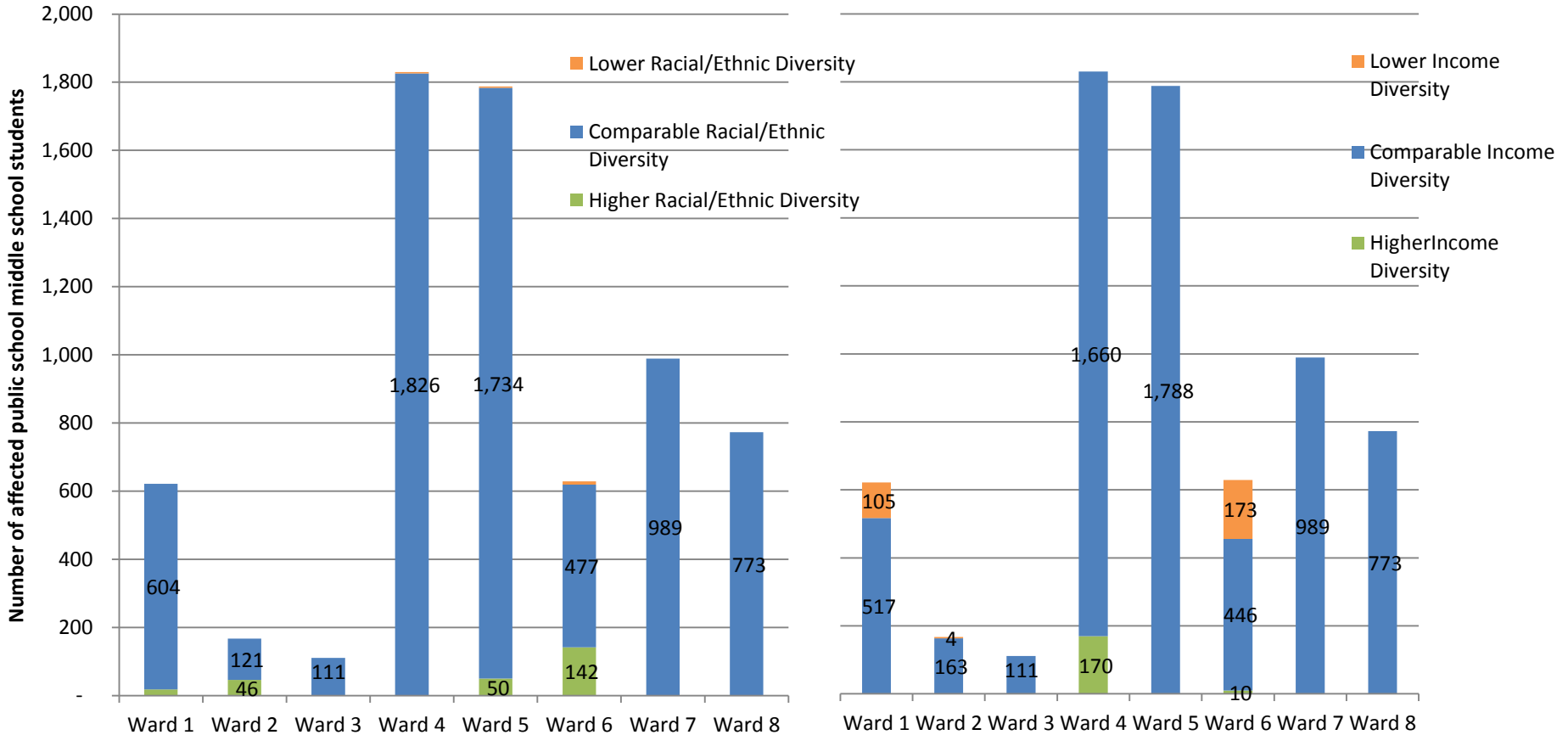
Changes in DC CAS Scores for Affected Middle School Students for Draft Recommended Boundaries



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

- Affected elementary students in Wards 1, 6, and 7 would have the greatest number of students who would have the right to attend a school in a higher DC CAS quartile tier than they currently have a right to.
 - This is driven by students with a right to Browne being reassigned to Eliot Hine and Stuart Hobson, students with a right to Eliot Hine being assigned to Jefferson, and students with a right to Walker Jones being assigned to Stuart Hobson.
- Ward 7 has the greatest number of students who would have a right to a middle school with a lower DC CAS quartile tier than what they current have a right to.

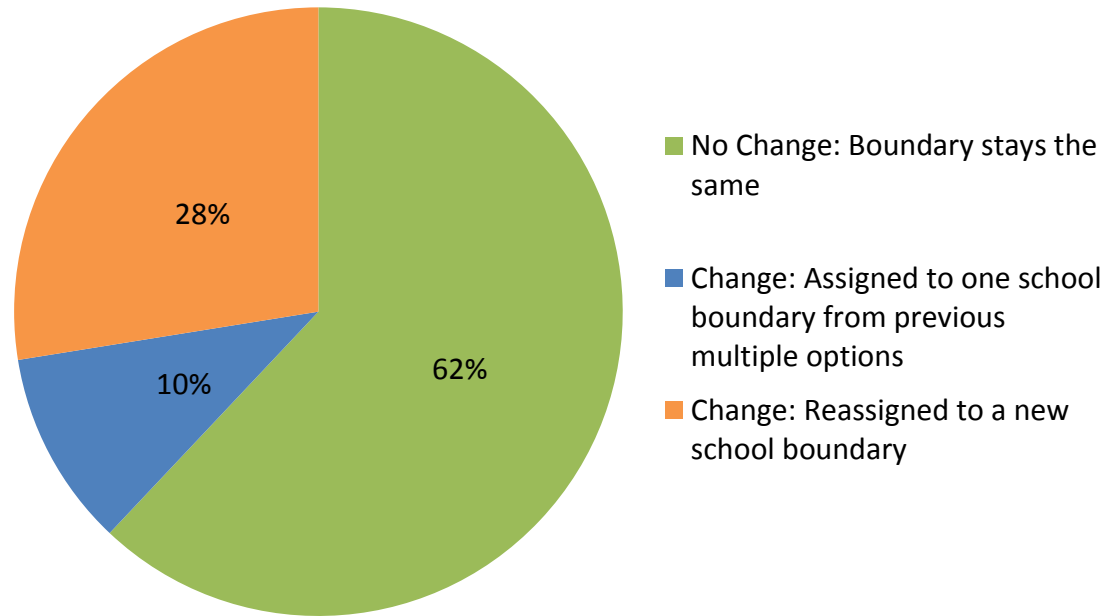
Changes in Racial/Ethnic Diversity for Affected Middle School Students



- 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 would be assigned to a boundary with lower racial and income diversity.

Impact of Proposed High School Boundaries

Impact of Draft Recommended High School Boundary Changes, Citywide 2013-14



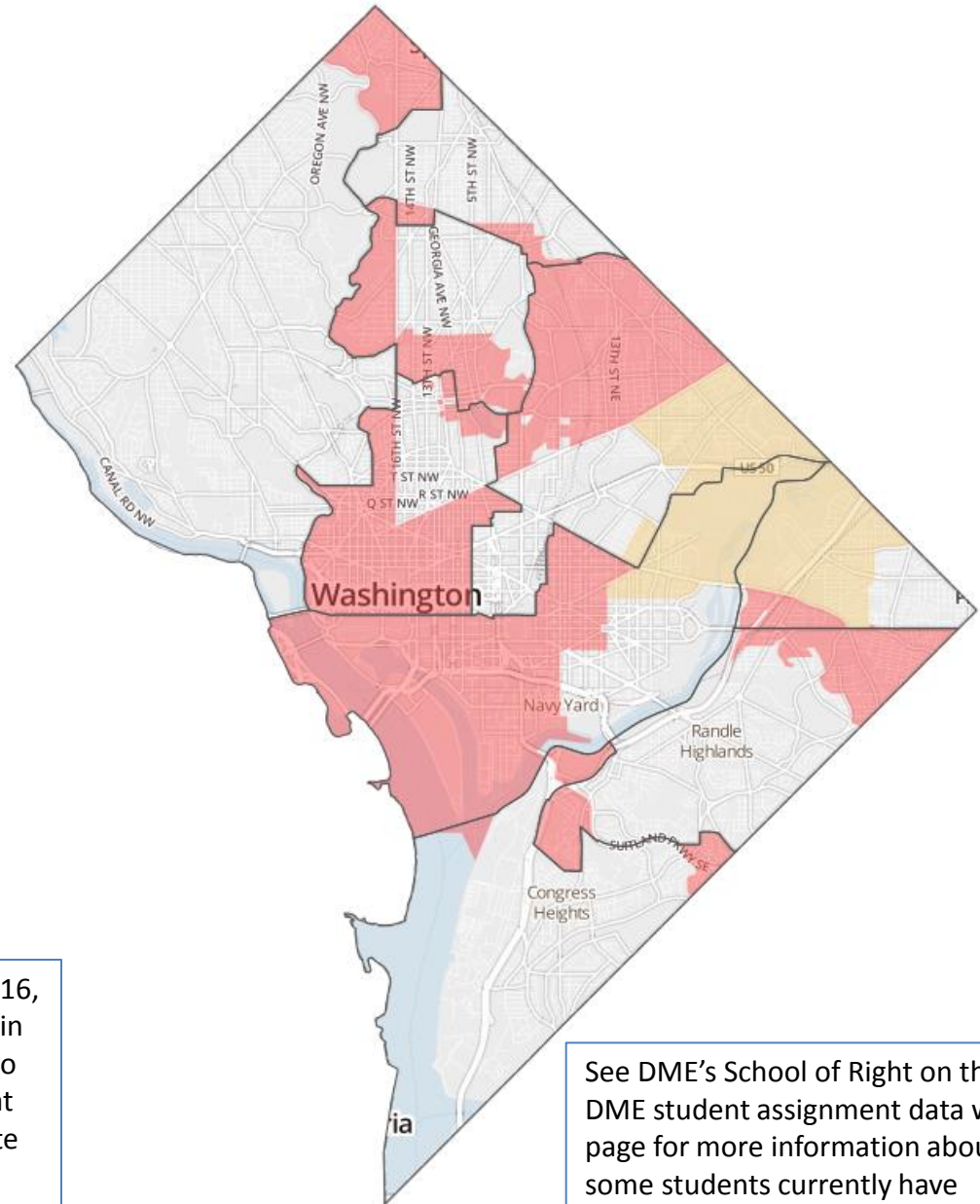
n=17,205

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

- 62% of all public high school students' rights would not be affected by proposal
- 10% would be assigned to one of school right from their current multiple right options
 - These students lived in the former Spingarn HS boundary.
- 28% would be reassigned to a different school of right

Proposed 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.

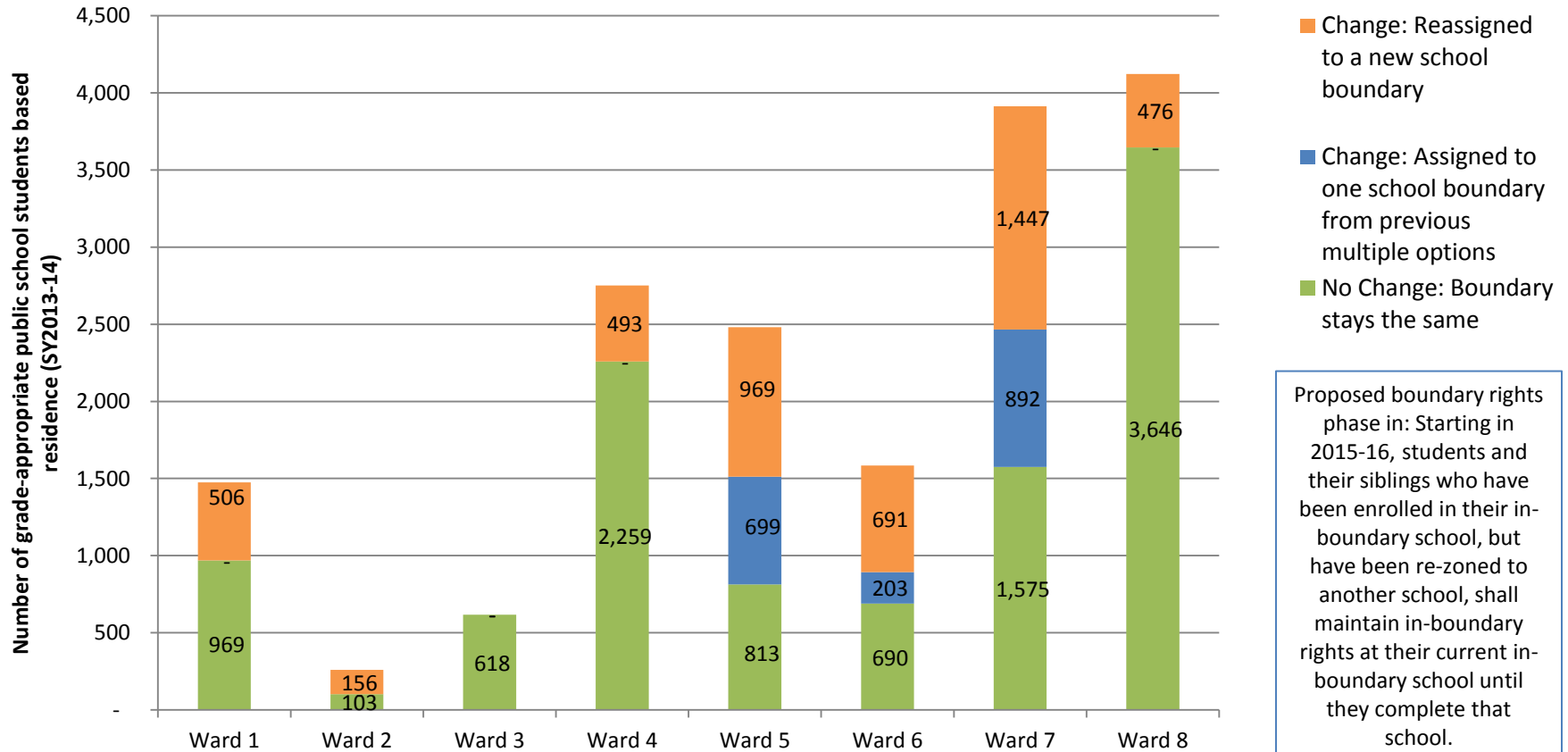
Areas of the City Where Draft Recommended High School Boundary Changes Propose a Reduction or Change in Rights



Proposed 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 Draft Recommended High School Boundary Changes by Ward, 2013-14



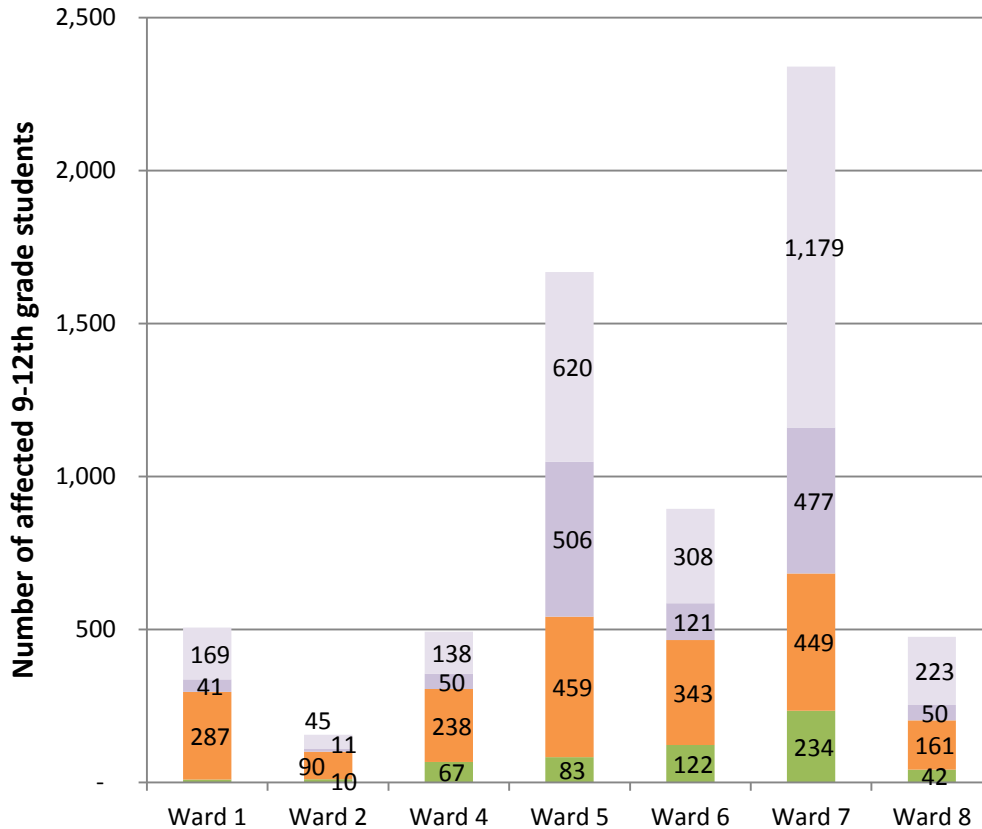
- Due to the proposed geographic feeder alignment of the ES, MS, and HS boundaries:
 - Portions of the current Eastern boundary would be reassigned to Anacostia and H.D. Woodson
 - Portions of the current Roosevelt boundary would be reassigned to Dunbar and Coolidge
 - Portions of the current Cardozo to Roosevelt and Dunbar
 - Portions of the current Dunbar to Eastern and Cardozo
 - Portions of the current Wilson boundary are reassigned to Eastern, Cardozo, Roosevelt
- The students assigned to just one school boundary from previous options includes students from the former Spingarn boundary.

Impact of the Proposed High School Rights on Current High School Students, 2013-14

Current High School Right	Proposed High School Right	Total Number Affected High School Students
Eastern	Anacostia	995
Cardozo	Roosevelt	625
Roosevelt	Dunbar	539
Cardozo	Dunbar	356
Wilson	Eastern	325
Dunbar	Cardozo	290
Anacostia	Ballou	276
Eastern	Woodson	271
Dunbar	Eastern	239
Ballou	Anacostia	200
Wilson	Cardozo	165
Roosevelt	Coolidge	153
Woodson	Anacostia	128
Coolidge	Wilson	80
Wilson	Roosevelt	43

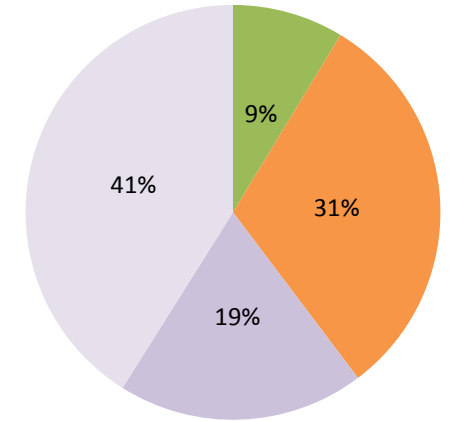
- Almost 1,000 high school students (995 students) living in the current Eastern boundary are proposed to be reassigned to Anacostia. This is due to geographically aligning the feeder patterns.
- Another 625 students currently living in the Cardozo boundary would be reassigned to Roosevelt.
- 539 current Roosevelt students would be reassigned to Dunbar under the proposal.

Distribution of High School Students Affected by Draft Recommended High School Boundary Changes



- Attending a Charter School
- DCPS OOB student, not already attending proposed school or their current in boundary school
- DCPS student, attending in boundary school, does not have right to that school under proposal
- DCPS student, already attending proposed school

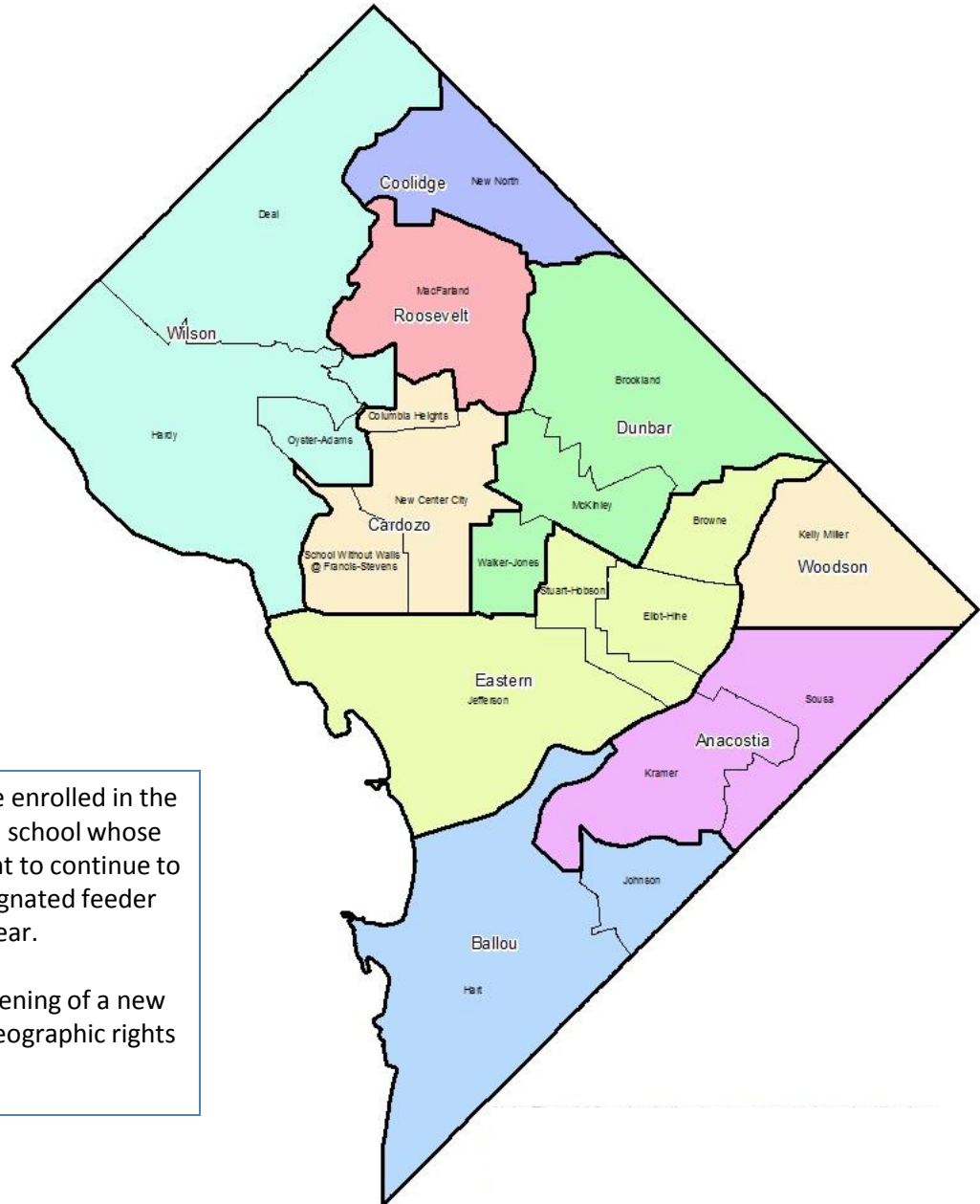
Citywide



n=6,532

- The proposal would assign 557 DCPS high school students to the school that they are already attending (9% of DCPS high school affected students).
- Another 2,027 DCPS students (31% of DCPS high school affected students) who are currently attending in boundary would lose their right to their current in boundary school.
- The greatest number of affected students losing their in boundary right where they are currently attending is in Ward 5, 7, and 6.

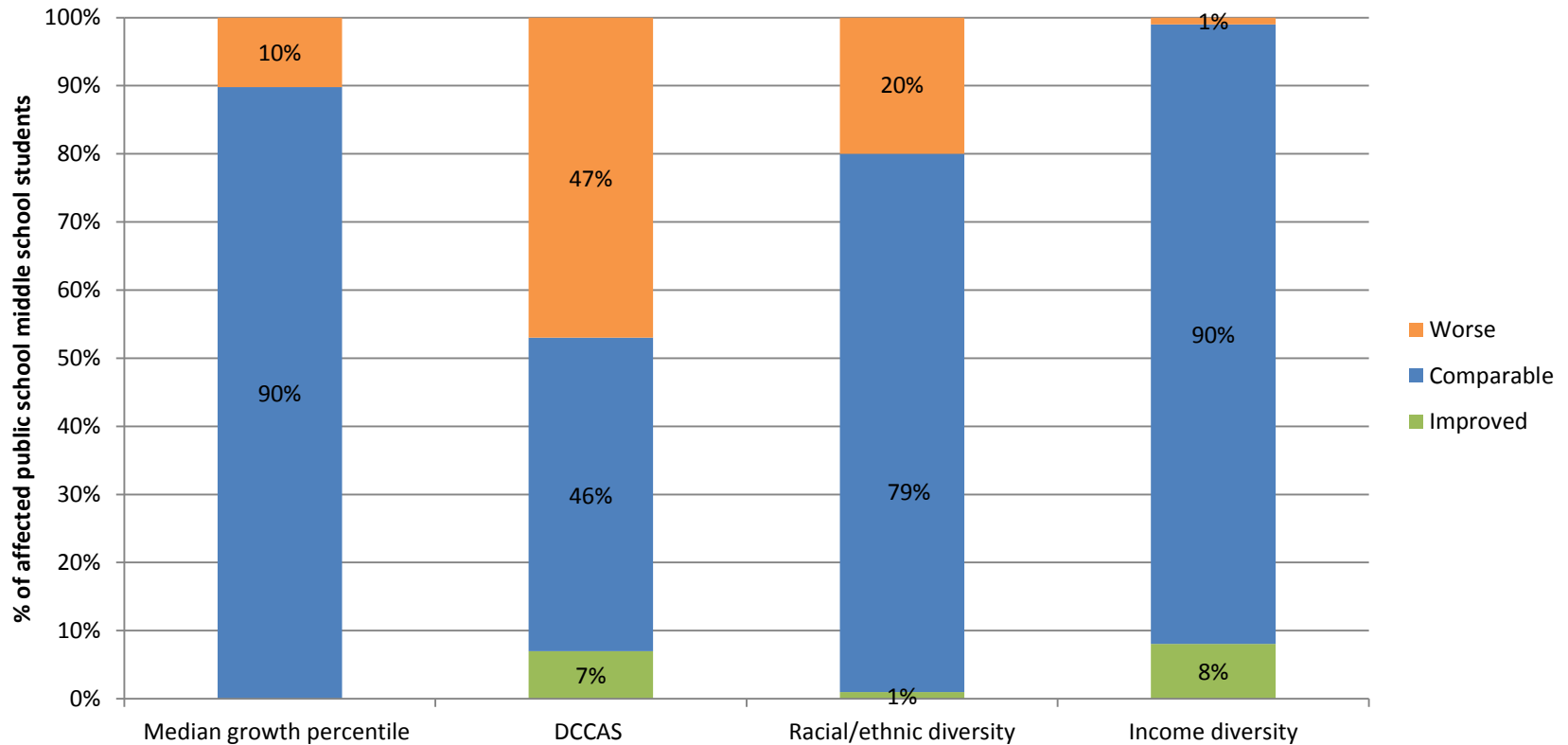
How the Proposed Middle School Feeder Patterns Result in High School Boundaries



Proposed geographic rights phase in: Students who are enrolled in the 6rd through 8th 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.

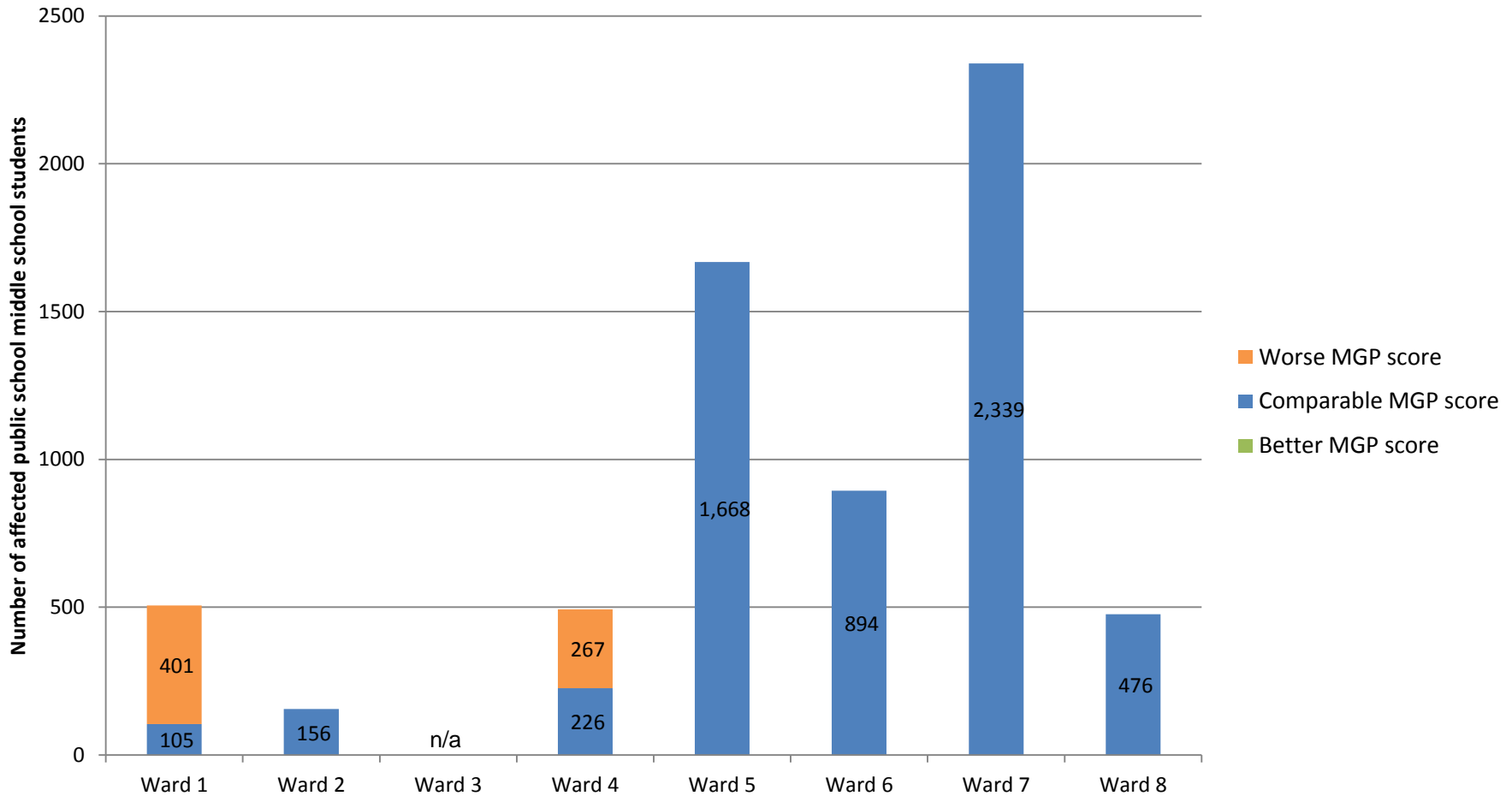
Students whose new feeder pathway relies on the opening of a new school shall retain their current feeder pathway and geographic rights until the new school is open.

Changes in Characteristic Impacts for Affected High School Students Citywide



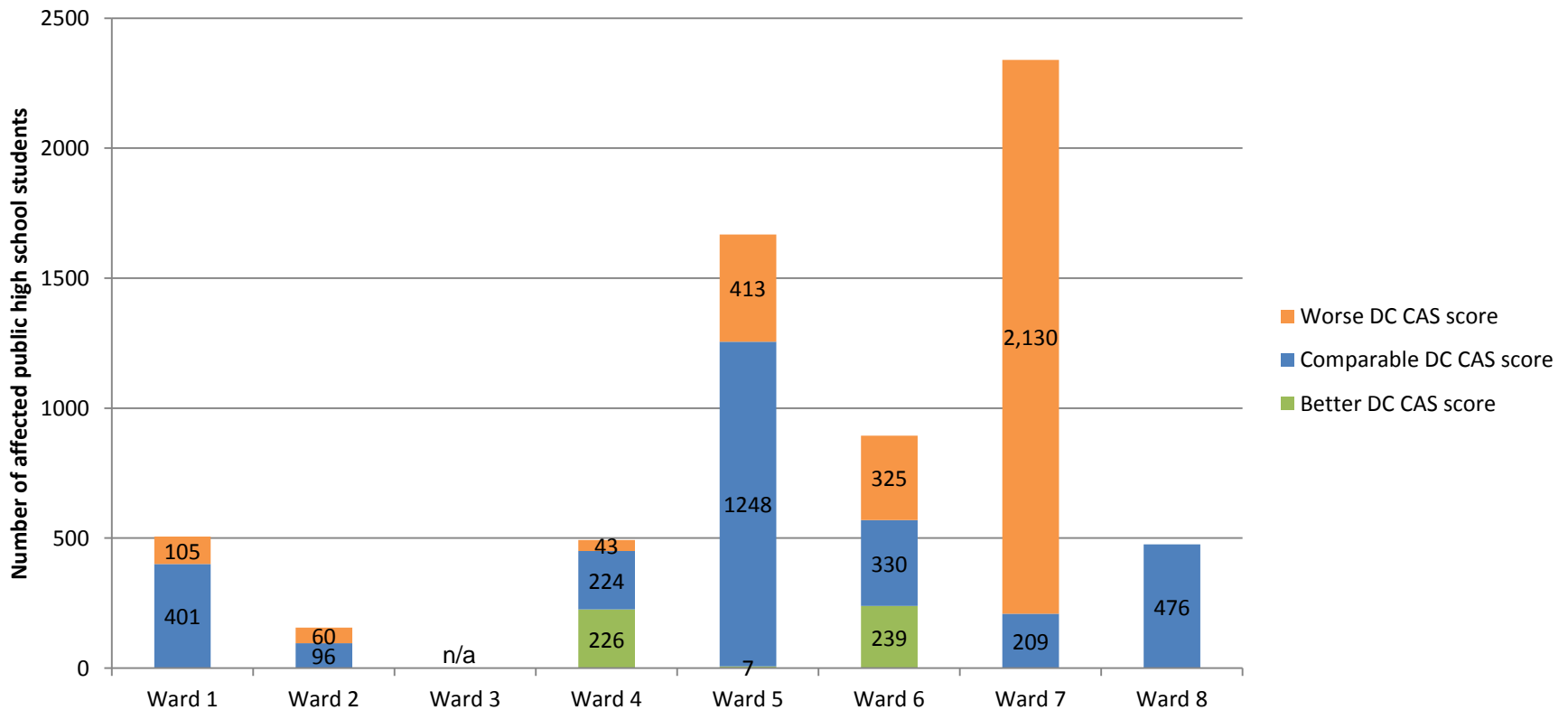
- More than 90% of affected high school students would be reassigned to a new school of right where the MGP and income diversity of the boundary would be comparable.
- 79% of affected high school students would be assigned to a new high school where the racial/ethnic diversity of the boundary would become less diverse.
- 46% of affected high school students would be assigned to a new high school where the DC CAS test scores are in comparable quartile tiers, and another 47% would be assigned to where the test scores are in lower quartile tiers.

Changes in MGP Scores for Affected High School Students



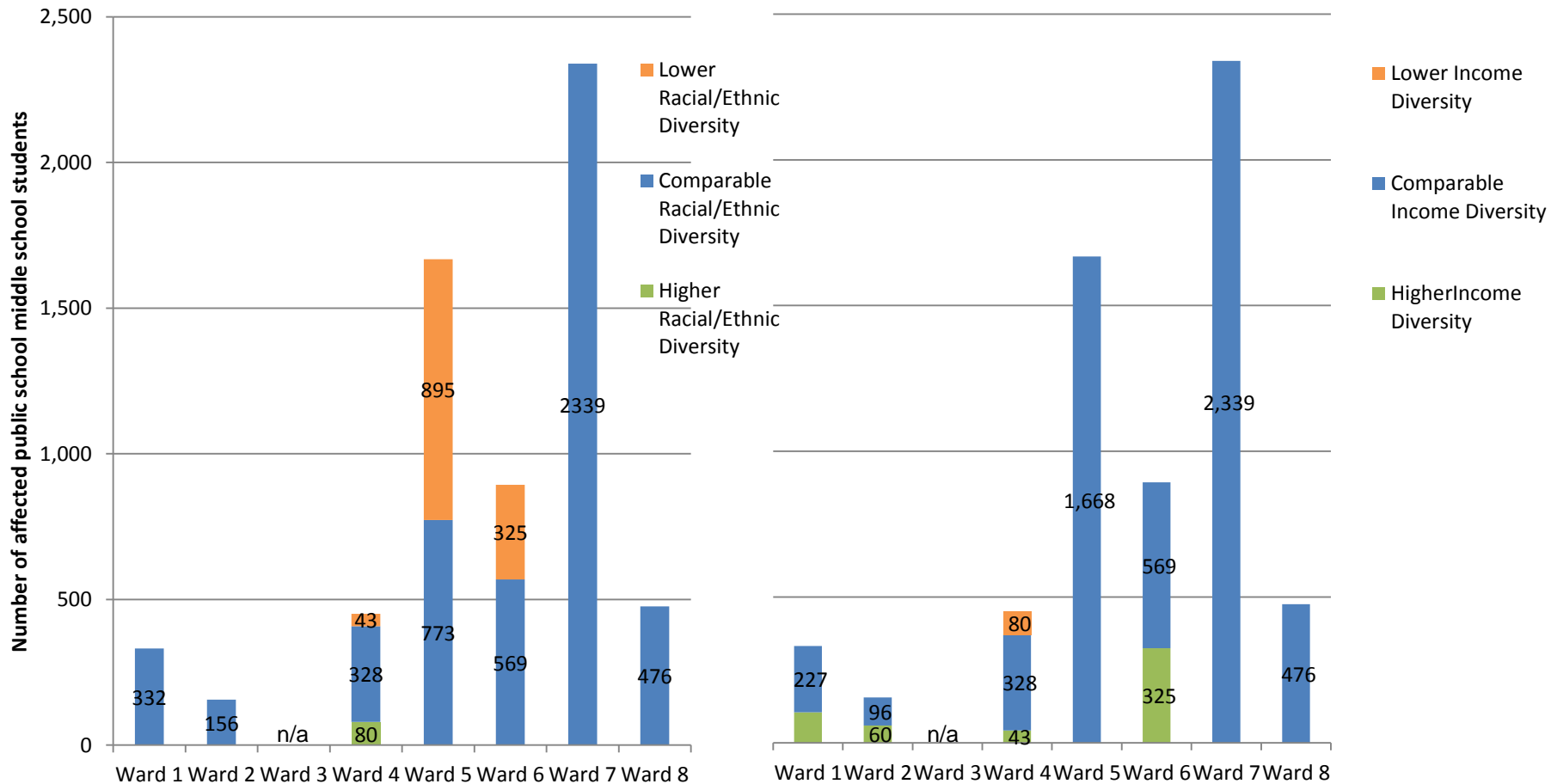
- Affected high school students living in Wards 2, 5, 6, 7, and 8 would be assigned to a new high school of right with a comparable MGP score.
- Affected students in Wards 1 and 4 would be assigned to a new school of right with a lower MGP score – these are students who have a right to Cardozo HS and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

Changes in DC CAS Scores for Affected High School Students



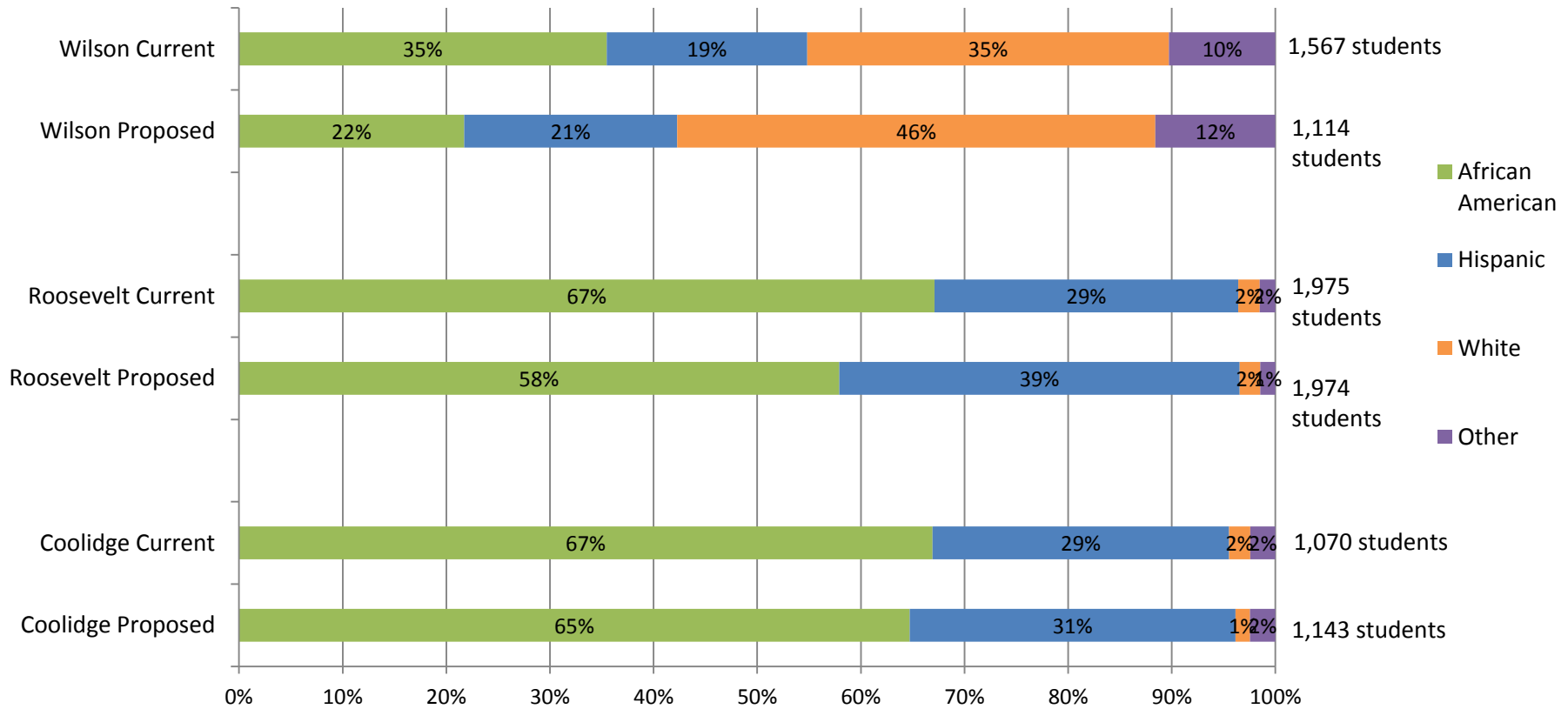
- Affected high school students living in Ward 7 would be assigned a new school of right that is in a lower DCCAS quartile tier than their current school of right.
 - This is driven primarily by students with current Eastern HS rights being reassigned to H.D. Woodson HS and Anacostia HS, as well as the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

Changes in Racial/Ethnic Diversity for Affected High School Students



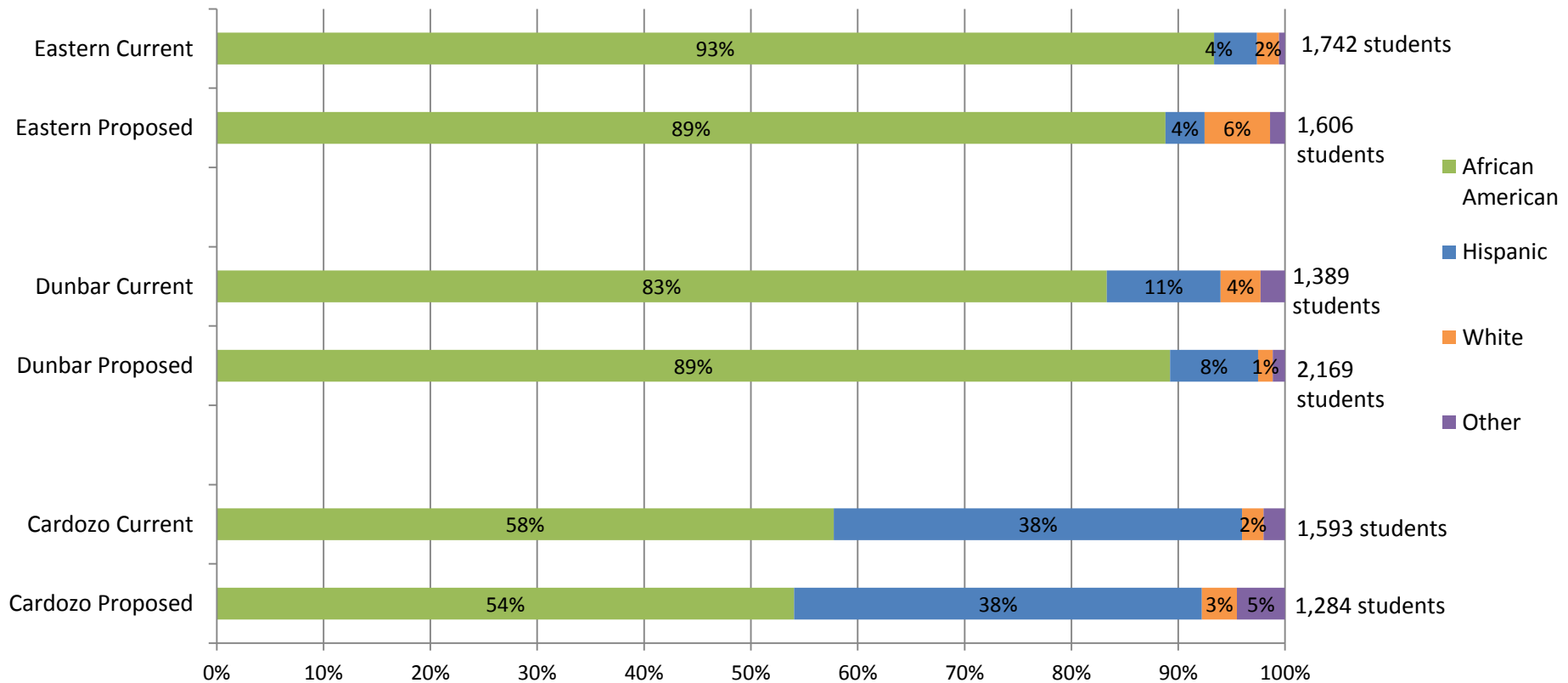
- 895 affected high school students in Ward 5 would be reassigned to a high school boundary with lower racial/ethnic diversity than they do currently. This is driven primarily by students with a right to Cardozo and Roosevelt being reassigned to Dunbar as a school of right.
- 325 affected high school 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 Proposed High School Boundaries – Upper NW/NE



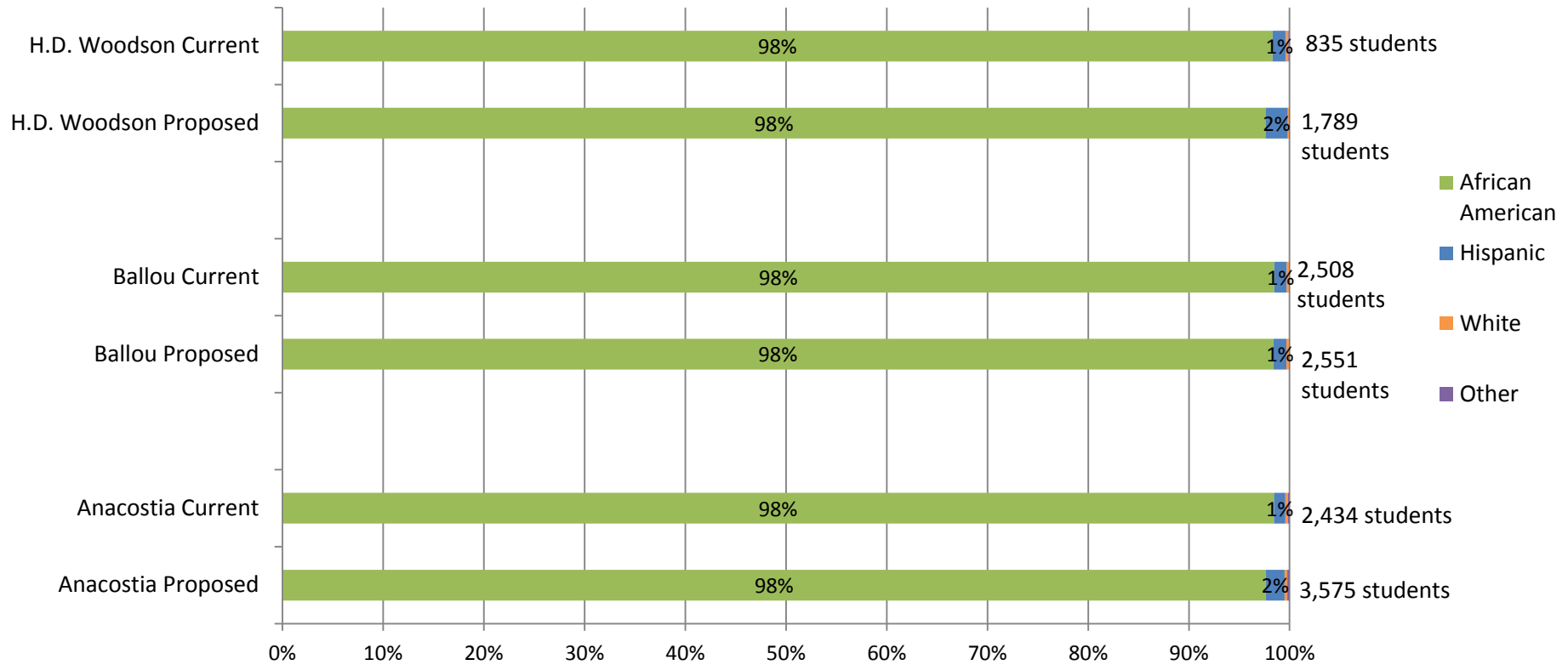
- This graphic displays the shares of ALL high school students living in the current and proposed high school boundaries by their race/ethnicity (not just affected students as the earlier entropy method analysis showed).
- The proposed Wilson boundary would have a greater proportion of white non-Hispanic students living in the proposed 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 proposed Roosevelt boundary would have a greater share of Hispanic students living in the boundary than they do currently (38% versus 29%, respectively).

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



- This graphic displays the shares of ALL high school students living in the current and proposed high school boundaries by their race/ethnicity (not just affected students as the earlier entropy method analysis showed).
- The proposed 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 proposed 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 Proposed High School Boundaries – East End



- This graphic displays the shares of ALL high school students living in the current and proposed high school boundaries by their race/ethnicity (not just affected students as the earlier entropy method analysis showed).
- Due to the racial segregation of the Wards 7 and 8, the proposed 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 1,141 students to the Anacostia boundary and 954 students to the HD Woodson boundary.