Estimating Changes in the Supply of and Demand for Child Care in Philadelphia

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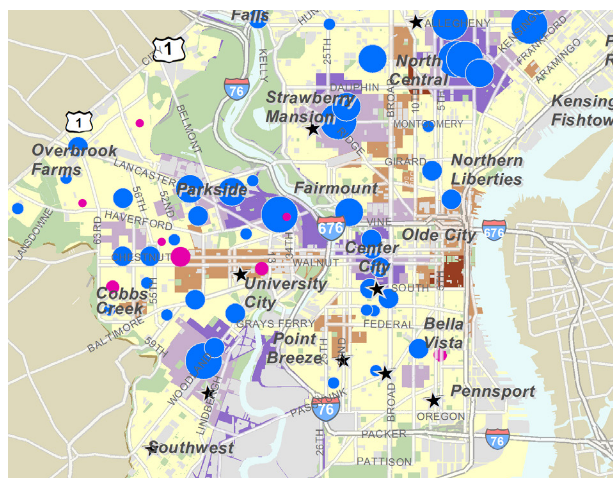

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Introduction

In 2014, with support from The William Penn Foundation, Reinvestment Fund conducted an initial analysis of the supply of and demand for child care in Philadelphia to identify areas of the city where targeted investments could help address shortages of high-quality child care. Now in its fourth update, Reinvestment Fund's 2018 childcare analysis provides updated estimates to track the change over time in the supply of, demand for, and shortages in child care. Reinvestment Fund's Childcare Map is an interactive online tool, www.childcaremap.org, that makes the results of this work accessible to the public at no cost. The tool identifies neighborhoods where high-quality child care is scarce in absolute and relative terms, while also providing actionable information for funders, practitioners, and childcare advocates.

This report presents the results of descriptive and spatial analyses of the child care landscape in Philadelphia in 2018. It details both short- and long-term changes in the supply of, demand for, and gaps in care; the year-to-year changes from 2017 to 2018, as well as shifts since the first analyses were conducted in 2014. It is important to note that various factors could contribute to the observed changes. For example, demographic shifts can affect demand, operation cost can affect supply, and new policy initiatives and investments can directly impact gaps. To this last point, this analysis also presents the location of strategic investments made in facilities in high-gap areas through the Fund for Quality (FFQ). Subsequent updates to the childcare analysis will be conducted to assess the impact of FFQ investments on gaps between supply and demand for child care in the years ahead.

2018 Key Findings

- **Over 13 percent of demand was unmet in 2018.** With a total supply of 98,073 and a *maximum potential demand* of 113,001, Philadelphia registered an absolute shortage of childcare capacity of nearly 14,928 in 2018. Absolute shortage measures the raw difference between supply and maximum potential demand, not accounting for parents that choose in-home or informal care arrangements.

- **Supply grew slightly, while demand was relatively constant from 2017 to 2018.** Estimated supply inched upward by 4% between 2017 and 2018 while *maximum potential demand* inched downward by 2.4 percent.

- **High-quality supply continued to grow.** The number of high-quality seats has continued to rise. About 2,552 new high-quality seats were added since 2017. The number of high-quality seats has increased by 7,976 since 2014.

- **The most severe shortages in high-quality supply persist in specific neighborhoods.** In 2018, the most severe relative shortages in high-quality child care continue to be in many of the same areas: parts of Northwest Philadelphia (Roxborough, Germantown); Southwest Philadelphia; the River Wards (Kensington/Fishtown, Port Richmond); several neighborhoods in the Northeast (Bustleton and Holmesburg). Shortages narrowed in Chestnut Hill, Northern Liberties, Overbrook Farms, Summerton, and Torresdale.

Estimating the Supply of Child Care

Beginning in 2018, OCDEL altered the Keystone STARS rating system to change how programs are rated and to remove the "Not STAR Rated" designation. Going forward all sites formerly classified "Not STAR Rated" will be reclassified as 1 STAR. Additionally, changes to how programs can achieve a high-quality rating have the potential to substantially increase the number of high-quality rated sites in Philadelphia. The result of those changes does not yet appear to have substantially impacted the number of high-quality sites in the city. For more information about how changes to Keystone STARS will impact centers in Philadelphia, see Reinvestment Fund's "Understanding How Changes to Keystone STARS Ratings Will Affect Gaps in the Supply of High-Quality Child Care" (https://goo.gl/hSb2nX).

At the suggestion of the Foundation and various local stakeholders, for 2018, Reinvestment Fund also reclassified all Head Start and School District of Philadelphia childcare programs as high-quality. In the past, these programs would only be classified as high-quality if they participated in the Keystone STARS rating system and achieved a STAR 3 or STAR 4 rating. Many Head Start and School District sites lacked a STAR rating and were previously classified as "not certified". School District programs in particular are not required to hold a STAR rating and many do not participate in the state's rating system, despite meeting many of the same standards as a STAR 3 or STAR 4 program. To the best of our ability, this change in categorization has been applied to previous years, allowing for a more complete estimate of how the supply of high-quality programs has changed over time.

Finally, for the first time since the initial analysis of 2014, the team conducted a longitudinal data analysis that cross-referenced supply datasets between the years 2014, 2017, and 2018. This undertaking not only made it possible for us to establish a multi-year relational database of Philadelphia childcare providers that would benefit the future updates of this study, but also allowed us to make retrospective data revision that improved overall data accuracy and consistency across years.

Taken together, these three adjustments (i.e., OCDEL's reclassification of STAR ratings, Reinvestment Fund's updated definition of high-quality, Reinvestment Fund's longitudinal data analysis) resulted in a change in the estimated supply of childcare across all years, generally increasing the number of high quality seats and reducing the number of uncertified seats. Overall, the adjustments resulted in a 5% change in supply across all three years. For example, the maximum potential supply of high-quality seats in 2018 is estimated to be 30,796 in the updated analysis, compared to 25,373 when estimated by the original methodology. This increase of 5,423 seats can be attributed to the reclassification of Head Start and School District childcare program seats as high-quality, which added 6,288 seats, and the longitudinal data adjustment, which removed 865 seats. To help illustrate how changes to the analysis methodology impacted our results, where appropriate, tables on the following pages present a version of the analysis with and without the updated methodology.

Table 1 presents the changes over time in the number and share of seats in total, certified, and high-quality providers across the city. Using the updated analysis results displayed Table 1, there is an estimated maximum potential supply of 98,073 childcare seats in Philadelphia in 2018.[1] Since 2017, total supply of childcare grew by 4%. Between 2014 and 2018, total supply of child care increased by 8 percent from 90,533 to 98,073. Under the original analysis approach, the decline in uncertified providers appeared larger, while trends in the number of high quality and certified seats were similar.

[1] Please see initial methodology report at https://www.reinvestment.com/childcaremap/pdfs/full.pdf for more detailed information on sources for supply data and estimating supply.

Table 1: Estimated Supply of Total Child Care[2]

	2018 Childcare Analysis		Change from 2017		Change from 2014	
	Total Seats	Share of Total Seats	Total Seats	Share of Total Seats (Percentage Points)	Total Seats	Share of Total Seats (Percentage Points)
Updated Analysis						
Certified	81,667	83.3%	3,337	0.2%	8,510	2.5%
High-Quality	30,796	31.4%	2,552	1.4%	7,976	6.2%
STARS 1-2	50,871	51.9%	26,198	25.7%	22,998	21.1%
Not STAR Rated	0	0.0%	-25,413	-27.0%	-22,464	-24.8%
Not Certified	16,406	16.7%	440	-0.2%	-970	-2.5%
Total Seats	98,073	100.0%	3,777		7,540	
Original Analysis						
Certified	81,962	82.4%	6,849	4.8%	11,762	12.8%
High-Quality	25,373	25.5%	2,048	1.4%	10,736	11.0%
STARS 1-2	56,589	56.9%	30,599	30.0%	25,455	26.0%
Not STAR Rated	0	0.0%	-25,798	-26.7%	-24,429	-24.2%
Not Certified	17,505	17.6%	-4,139	-4.8%	-13,101	-12.8%
Total Seats	99,467	100.0%	**2,710**		**-1,339**	

Approximately 83 percent of the supply is provided by certified operators (Figure 1, see page 4). The share of certified seats in the city has been steadily increasing. Between 2014 and 2018, the share of certified seats increased by 2.5 percentage points from 80.8% of all seats to 83.3% of all seats. In terms of number of seats, the supply of certified seats grew by 12% percent or 8,510 seats. The number and proportion of high-quality seats has grown as well, with the number of high-quality seats growing by 7,976 or 35% since 2014. As a share of all seats, high-quality seats comprised 31.4% of all seats in 2018, a growth of 6.2 percentage points since 2014 when high-quality seats comprised only 25.2% of all seats.

Table 2 and Figure 2 (see page 4) present the number and share of certified seats by quality rating. In 2018, there are an estimated 30,796 high-quality seats (i.e., certified providers with a Keystone STARS rating of 3 or 4, Head Start providers, or School District sponsored childcare), accounting for 38 percent of certified seats. An estimated 50,871 certified seats (62%) have lower quality ratings (Keystone STARS ratings of 1 or 2). Between 2014 and 2018, the share of certified seats that are high-quality increased 6.5 percentage points from 22,820 out of 73,157 to 30,796 out of 81,667. In the original analysis the number of high-quality seats was much lower (25,373 vs 30,796) as was the number of high-quality seats as a proportion of all certified seats (31% vs 37%).

[2] The 2018 Childcare Analysis represented 2018 Q1 OCDEL data; the 2017 Analysis represented 2017 Q1 data; and the 2014 Analysis represented 2013 Q2 data. Year-by-year change for licensed child care represented change between 2017 Q1 and 2018 Q1 (i.e., four quarters), and 2014-2018 change represented change between 2013 Q2 and 2018 Q1 (i.e., 19 quarters).

Table 2: Estimated Supply of Certified Child Care

	Estimated Supply of Certified Child Care	Total Seats 2018	Share of Certified Seats 2018	Change in Share of Certified Seats (Percentage Points) 2017	2014
Updated Analysis	High-Quality (STARS 3-4)	30,796	37.7%	1.6%	6.5%
	STARS 1-2	50,871	62.3%	30.8%	24.2%
	Not STAR Rated	0	0.0%	-32.4%	-30.7%
	Total Certified Seats	81,667	100.0%		
Original Analysis	High-Quality (STARS 3-4)	25,373	31.0%	-0.1%	10.1%
	STARS 1-2	56,589	69.0%	34.4%	24.6%
	Not STAR Rated	0	0.0%	-34.4%	-34.8%
	Total Certified Seats	81,962	100.0%		

Figure 1: Estimated Supply of Total Child Care (n=98,073)

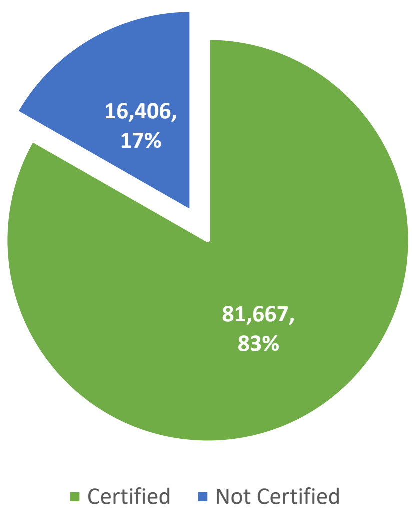
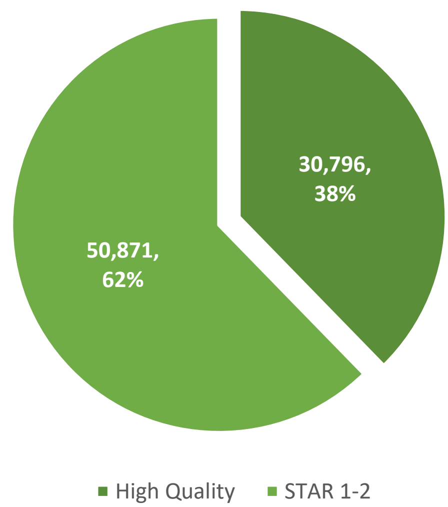


Figure 2: Estimated Supply of Certified Child Care (n=81,667)



A primary goal for the childcare analysis is to support the Fund for Quality and other stakeholders to make data-based decisions about where in Philadelphia to expand access to high-quality child care. Table 3 and Figures 3 and 4 (see pages 5 and 6) highlight changes in high-quality child care between 2014 and 2018.

Table 3 summarizes the factors that contributed to the change in high-quality supply between 2014 and 2018. Some of the sites that increased their rating between 2013 and 2018 may have done so as a result of changes to the Keystone STARS rating system implemented in 2018, rather than substantive programmatic changes. At this time, OCDEL has not released information detailing the justification for improved STARS ratings.[3]

[3] For more information about changes to the Keystone STARS system see: "Understanding How Changes to Keystone STARS Ratings Will Affect Gaps in the Supply of High-Quality Child Care" Available: https://goo.gl/hSb2nX

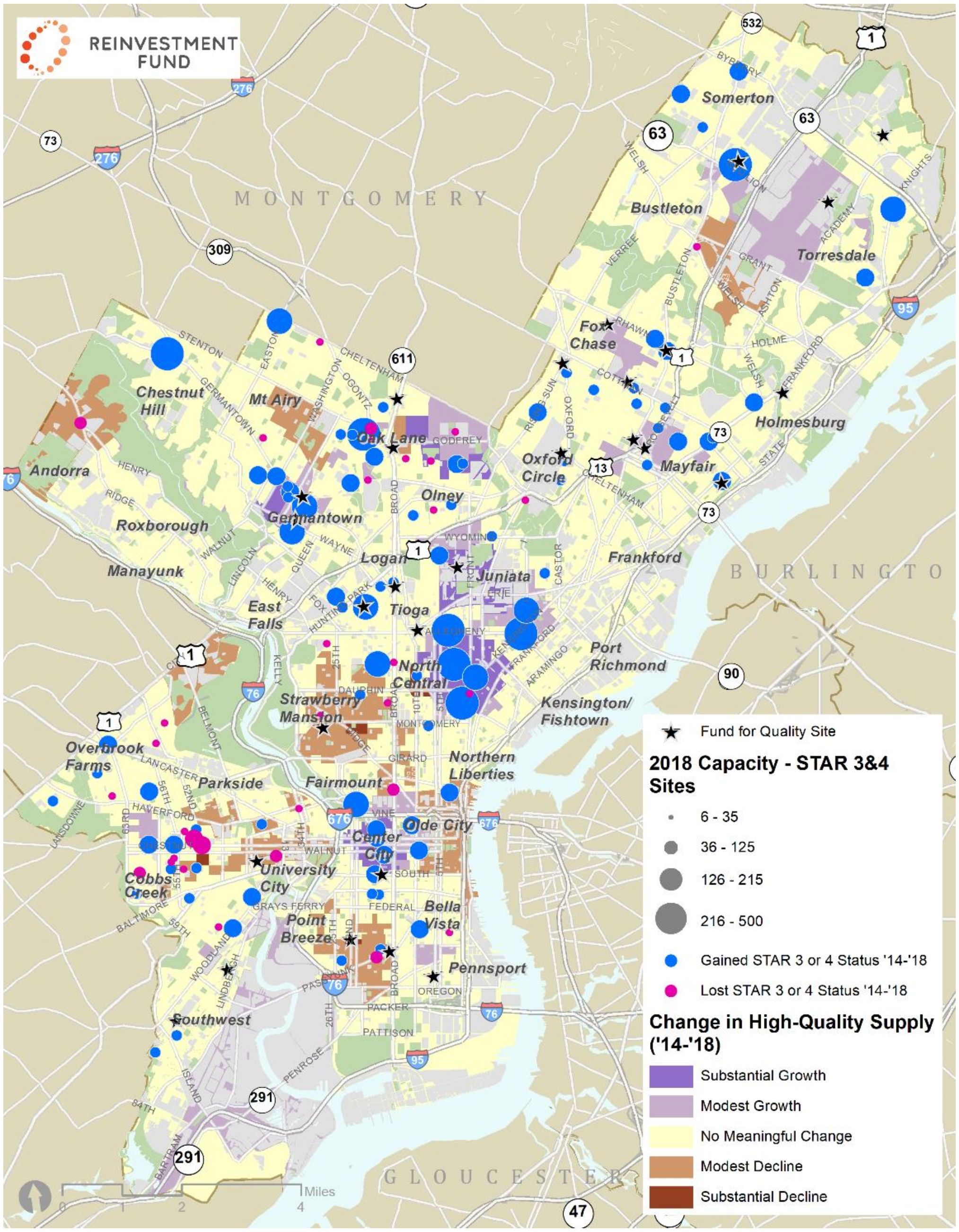
Table 3: Change in High-Quality Sites, 2014-2018

	Number of Sites	Total Capacity*
Positive Change	**161**	
Site STAR ***Rating Increased*** to High-Quality	89	5,928
High-Quality Site ***Increased Capacity***	44	5,312
Newly ***Opened*** High-Quality Site	72	5,752
Negative Change	**104**	
Site STAR ***Rating Decreased***	33	1,190
High-Quality Site ***Reduced Capacity***	24	2,187
Closed High-Quality Site	71	3,122
*Capacity represents 2018 capacity with the exceptions of Closed High-Quality Sites. Capacity for this subgroup is 2014 capacity.		

From 2014 to 2018, nearly one-and-a-half times as many sites contributed to high-quality expansion as those that contributed to reductions (161 v. 104 sites). Nearly as many high-quality sites closed as those that opened (72 vs 71), with the majority of high-quality capacity growth coming from sites that increased their rating. Overall, there were 349 high-quality providers in 2018, and the licensed capacity for 179 or 51% percent of these providers remained unchanged since 2014.

Figures 3 and 4 (see pages 6 and 7) present the spatial distribution of the factors highlighted in Table 3 to show what areas of the city have experienced substantial changes in high-quality supply since 2014. Figures 3 and 4 also include the location of Fund for Quality sites throughout the city. Areas in the city where the supply of high-quality seats substantially increased since 2014 include Center City, North Central, Juniata, Oak Lane/Olney, and Germantown. Modest declines in high-quality seats were concentrated in Olde City, Andorra, Strawberry Mansion, University City and Point Breeze.

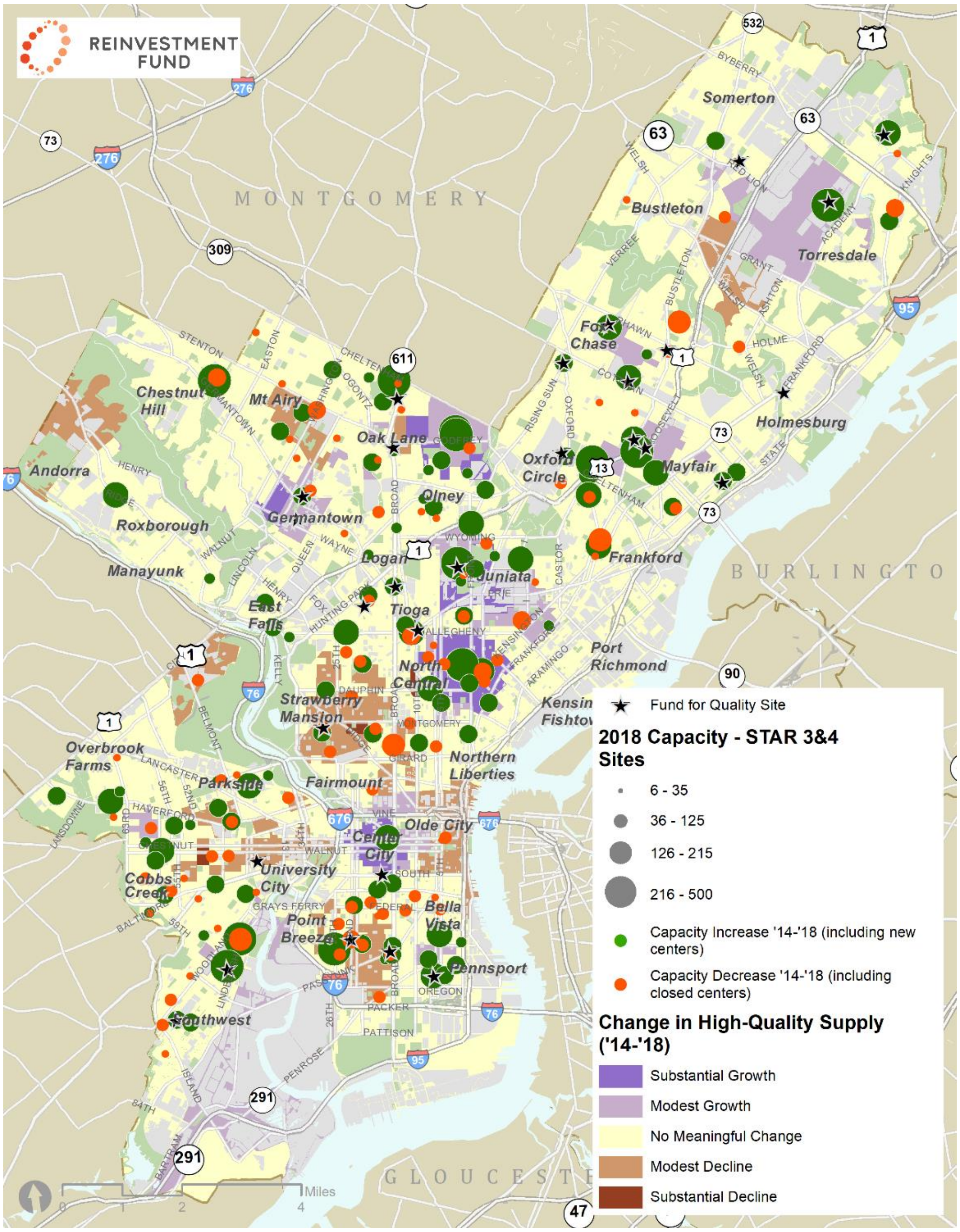
Figure 3: *Changes in Status* of High-Quality Centers & Changes in Supply Estimates for High-Quality Child Care (2014 to 2018)



In Figure 3:

- The black star represents a site that received Fund for Quality support between 2014 and 2018.
- Purple represents increases in high-quality supply; Brown represents declines in high-quality supply;
- Blue circles represent child care sites that increased their rating to high-quality status between 2014-18. Pink circles represent child care sites that reduced their rating to below high-quality status between 2014-18. The size of the circles represents the 2018 capacity of the facility.

Figure 4: *Changes in Capacity* at High-Quality Centers & Changes in Supply Estimates for High-Quality Child Care (2014 to 2018)



In Figure 4:

- The black star represents a site that received Fund for Quality support between 2014 and 2018.
- Purple represents increases in high-quality supply; Brown represents declines in high-quality supply;
- Green circles represent high-quality child care sites that increased capacity between 2014-18. Orange circles represent high-quality child care sites that reduced their capacity between 2014-18. The size of the circles represents the 2018 capacity of the facility (closed centers reflect 2014 capacity).

Areas with the largest gains in the supply of high-quality child care between 2014 and 2018 (dark purple areas in Figures 3 and 4) tend to be associated with providers that improved their *rating*, as shown with blue circles in

Figure 3, as opposed to increasing *capacity* at pre-existing high-quality sites, as shown with green circles in Figure 4. Accordingly, block groups with substantial growth in high-quality supply have at least one, if not multiple, centers that gained a high-quality *rating*. These areas may or may not have a center that increased *capacity* during this period.

Demand for Child Care

In 2018, an estimated population of 107,675 children under age five living in Philadelphia represents the *baseline demand* for child care. From this *baseline demand*, adjustments were made to account for commuting patterns and characteristics of parents as some parents prefer child care options near their work.[4] These adjustments suggest that 16,877 resident children travel with adults to child care located outside the city near a parent's place of work, while 22,203 children who live outside the city travel with parents to child care in the city, yielding a *maximum potential demand* of 113,001 for child care in Philadelphia.

Between 2017 and 2018, *maximum potential demand* declined slightly by 2.4 percent (2,725). However, over the period 2014 through 2018, there was a more substantial change; demand increased by 4.8 percent (+5,181). Demand in most neighborhoods was relatively stable. However, a handful of neighborhoods experienced substantial upticks in demand since 2014: North Philadelphia, Oak Lane, Fox Chase, Andorra, and Mayfair; on the other hand, Market East, West Philadelphia, Olde City, and Rittenhouse Square experienced sizable declines.

Identifying High Need Areas

Understanding the geographic distribution of shortages in the supply of child care provides guidance for programmatic or capital investment activity to address areas of concern. Two shortage measures are calculated: *absolute* and *relative shortage*. The *absolute shortage* is the raw difference between supply and demand within a given block group. The *relative shortage* is an adjusted figure that accounts for supply and demand in neighboring block groups and the level of supply the market typically provides to identify block groups where observed shortages between supply and demand are: *a)* greater than expected; *b)* less than expected; or *c)* meet expectations.[5] As observed in previous reports, the geographic distributions of *absolute* and *relative shortages* are different for the three different types of supply – total, certified, and high-quality.

Absolute Shortage

With a total demand of roughly 113,001 and a total supply of 98,073, over 13 percent of maximum potential demand was unmet in 2018 (i.e., a citywide absolute shortage of 14,928 seats). The *absolute shortage* widens to 82,205 for high-quality seats. Although there is still a substantial shortage in high-quality seats, the shortage has been declining over time. Table 4 shows that high-quality seats met 27.3 percent of demand in 2018, compared to only 21.2 percent in 2014. The original analysis showed a larger absolute shortage of high-quality seats (87,628 vs 82,205), but also a much larger decline in the absolute shortage since 2014.

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[4] Please see initial methodology report at https://www.reinvestment.com/child caremap/pdfs/full.pdf for more detailed information on sources for demand data, assumptions, and estimating demand.

[5] Please see initial methodology report at https://www.reinvestment.com/child caremap/pdfs/full.pdf for more detailed information on sources for the difference between the two types of gap measures.

Table 4. Commuter Adjusted Demand Met by Observed Supply

		2018	2017	2014
Updated Analysis	Absolute Shortage in Total Childcare Seats	14,928	21,430	17,287
	Absolute Shortage in High-Quality Seats	82,205	87,481	85,000
	Percentage of Total Demand Met by All Seats	86.8%	81.5%	84.0%
	Percentage of Total Demand Met by High-Quality Seats	27.3%	24.4%	21.2%
Original Analysis	Absolute Shortage in Total Childcare Seats	13,534	18,969	7,014
	Absolute Shortage in High-Quality Seats	87,628	92,401	93,183
	Percentage of Total Demand Met by All Seats	88%	84%	93%
	Percentage of Total Demand Met by High-Quality Seats	22%	20%	14%

Relative Shortage in Total Childcare Supply

Areas with the most severe *relative shortages* in total childcare seats in 2018 are concentrated along the Delaware River, in Greys Ferry, and throughout the Northeast (see Figure A2, on page 12). Since 2014, neighborhoods where *relative shortages* became more pronounced include Holmesburg in the Far Northeast, Kensington/Fishtown, and Strawberry Mansion, while *relative shortages* narrowed in Bustleton, South Philadelphia, Mayfair, and Andorra/Roxborough (see Figure A3, on page 13).

Relative Shortage in Certified Supply

Areas with the most severe *relative shortages* in certified seats in 2018 are concentrated in Mt Airy, Olney, Southwest, South Philadelphia, Overbrook Farm, and Oxford Circle, and Torresdale (see Figure A4, on page 14). Since 2014, neighborhoods where *relative shortages* in certified seats became more pronounced include South Philadelphia and Oxford Circle, while *relative shortages* narrowed near Torresdale and Somerton, due to an overall increase in the share of existing centers that were certified (see Figure A5, on page 15).

Relative Shortage in High-Quality Supply

Areas with the most severe *relative shortages* in high-quality seats in 2018 continue to be in many of the same areas as previous analyses: parts of Northwest Philadelphia – Roxborough/Manayunk, Southwest Philadelphia, the River Wards (Kensington/Fishtown, Port Richmond), and a handful of Northeast neighborhoods (see Figure A6, on page 16). Since 2014, the largest increase in *relative shortages* occurred in Bustleton, while *relative shortage* narrowed in Somerton, Holmesburg, Torresdale, Chestnut Hill, Oxford Circle, and Northern Liberties (see Figure A7, on page 17).

Summary

The 2018 analysis highlights that ongoing challenges exist for families seeking high-quality child care in a number of Philadelphia's neighborhoods and communities with significant job centers. Although, the total supply of high-quality seats has expanded substantially since 2014, still only 27 percent of estimated maximum potential demand is met by high-quality supply. Furthermore, large shortages continue to persist in certain city neighborhoods, even as targeted investments are being made in some communities.

In summer 2017, OCDEL began the implementation of a revised STAR rating system that will impact the supply of what is designated high-quality child care across the city (see Reinvestment Fund's white paper examining the potential impact[6]). The roll out of the revised scores has been slow and those scores that were revised thus far did not substantially impact this year's analysis. Ongoing annual updates for this analysis of supply, demand and gaps will continue to track progress towards increasing access to high-quality child care through the Fund for Quality and other targeted programmatic interventions and investments.

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[6] The white paper is available at https://www.reinvestment.com/childcaremap/.

APPENDIX A: Additional Maps and Tables

Figure A1: Certified and Uncertified Childcare Sites (2018)

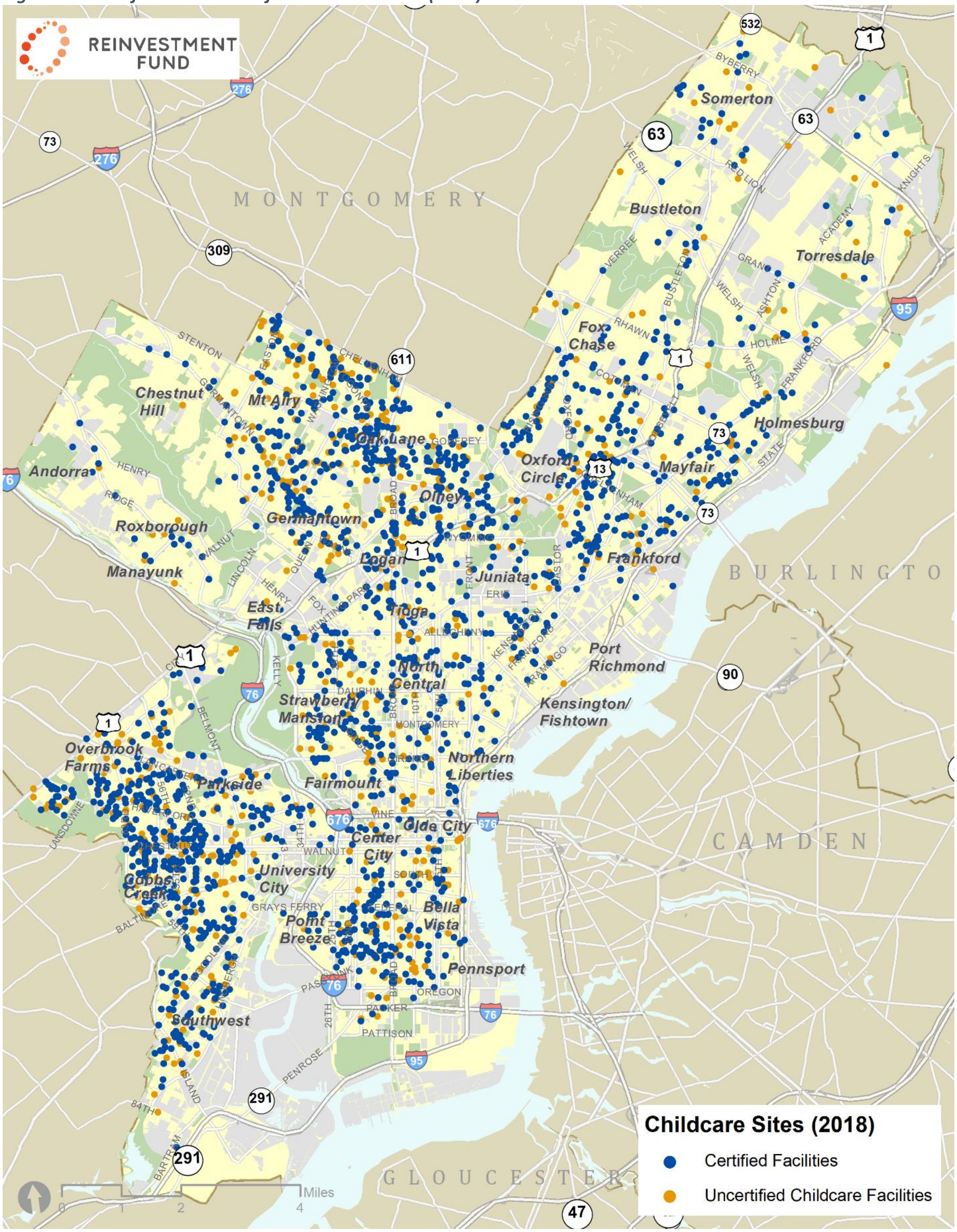

Figure A2: Relative Gap- Total Childcare Supply (2018)

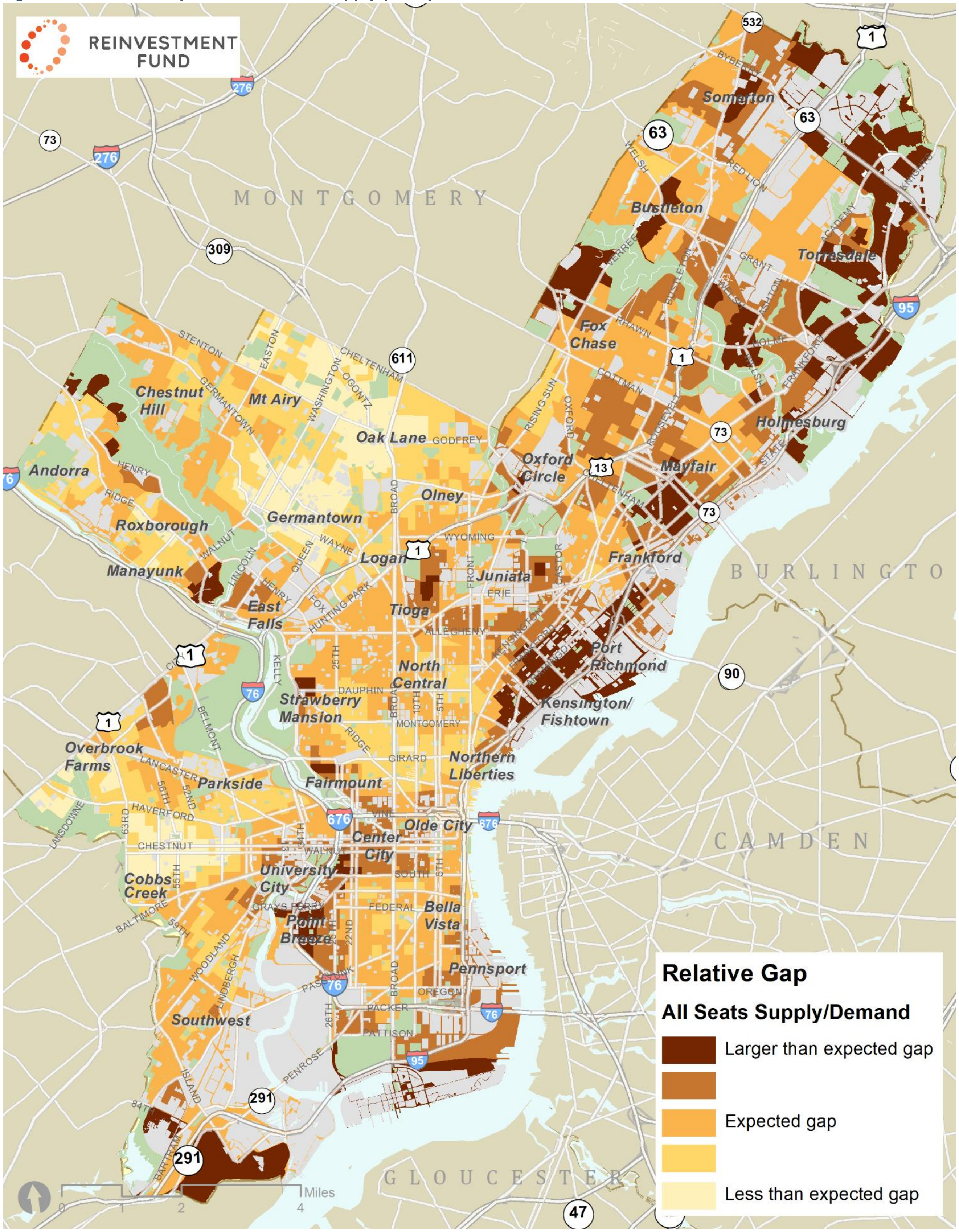

Figure A3 shows areas that have experienced changes in relative shortages since 2014 and areas with much larger than expected shortages in 2018. Areas outlined in maroon were areas that had much larger than expected shortages in 2018. Areas such as Mayfair and the far Southwest still had much larger than expected relative shortages, despite also seeing substantial declines in relative shortage since 2014. Areas in Somerton, North Central and Point Breeze experienced substantial increases in relative shortage.

Figure A3: Change in Relative Gap - Total Childcare Supply (2014-2018)

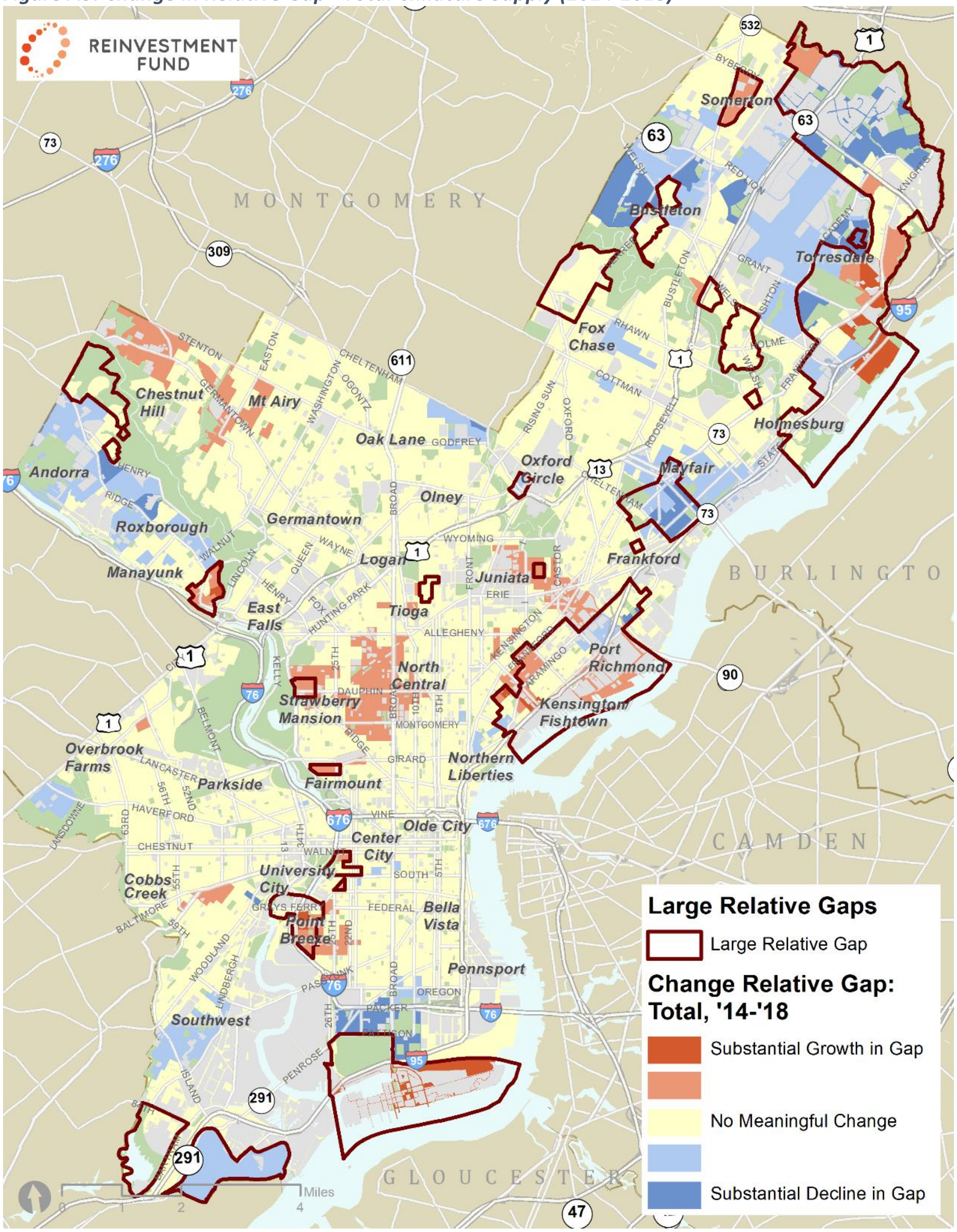

Figure A4: Relative Gap - Certified Childcare Supply (2018)

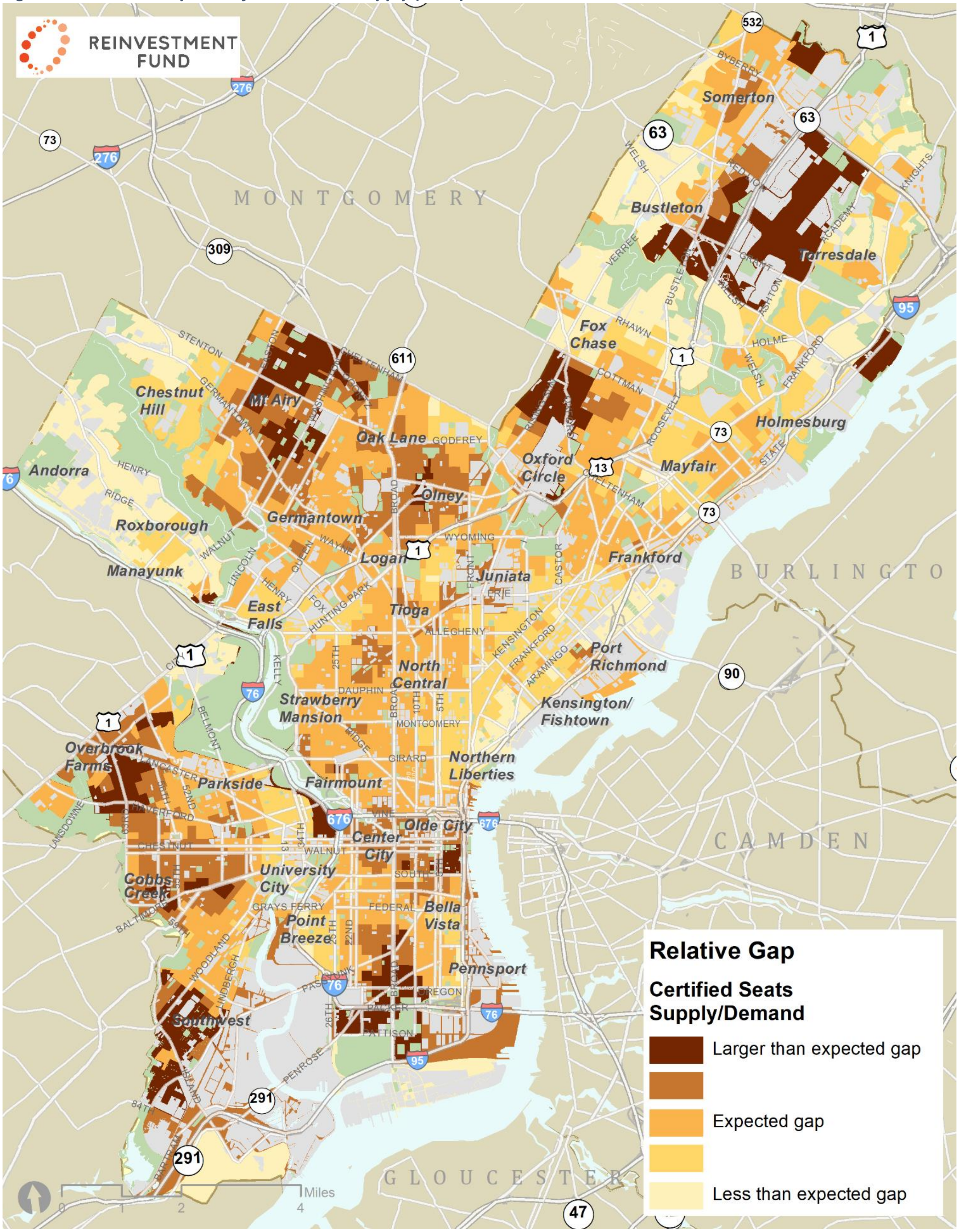

Figure A5 shows changes in the relative shortage of certified supply since 2014 and areas that had much larger than expected shortages of certified supply in 2018. Areas outlined in maroon were areas that had much larger than expected shortages in 2018. Areas in South Philadelphia and above Oxford circle experienced substantial growth in the relative shortage and in 2018 were classified as having much larger than expected shortages. Holmesburg experienced substantial declines in certified shortages, but still had larger than expected relative shortages in 2018.

Figure A5: Change in Relative Gap - Certified Childcare Supply (2014-2018)

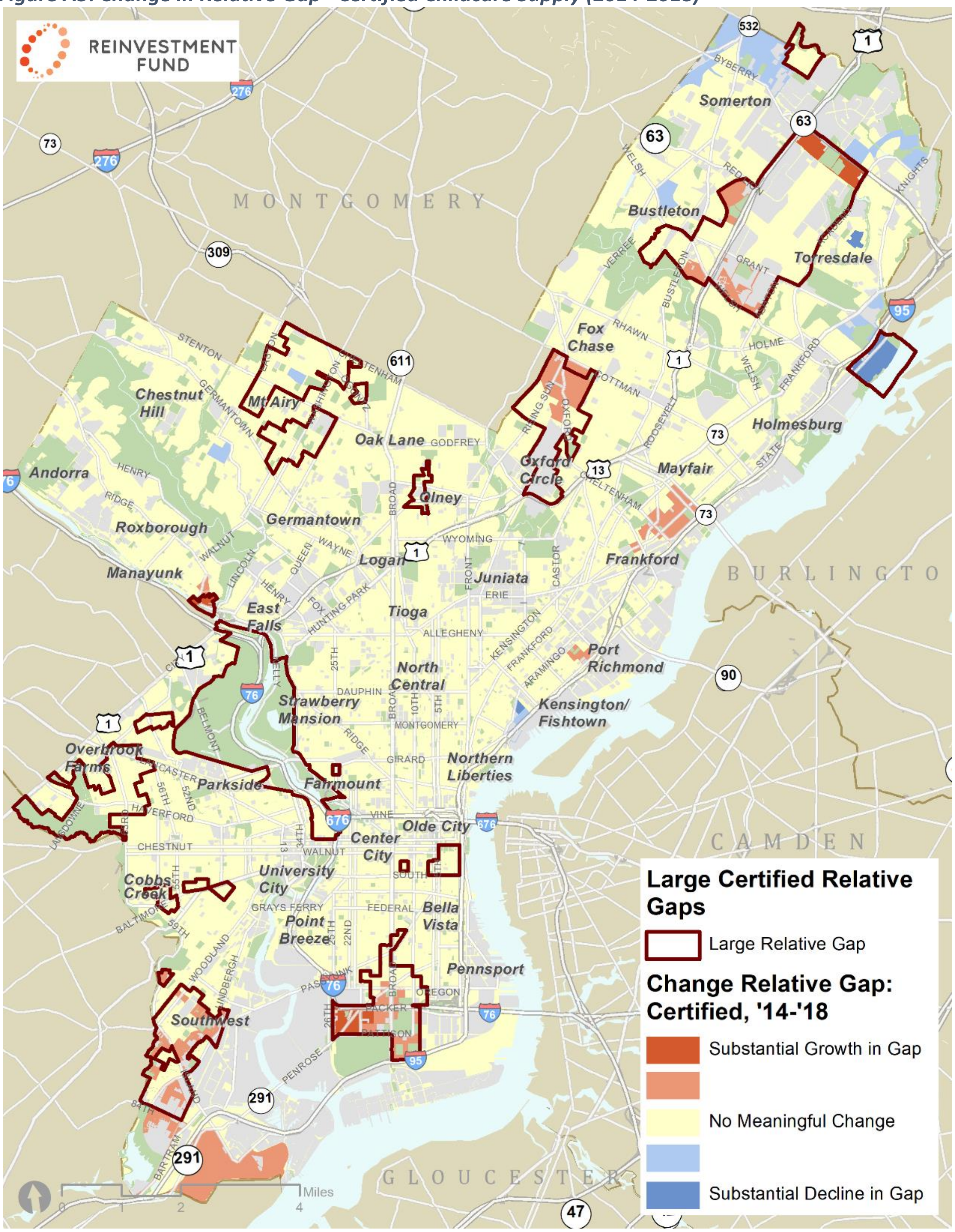

Figure A6: Relative Gap – High-Quality Childcare Supply (2018)

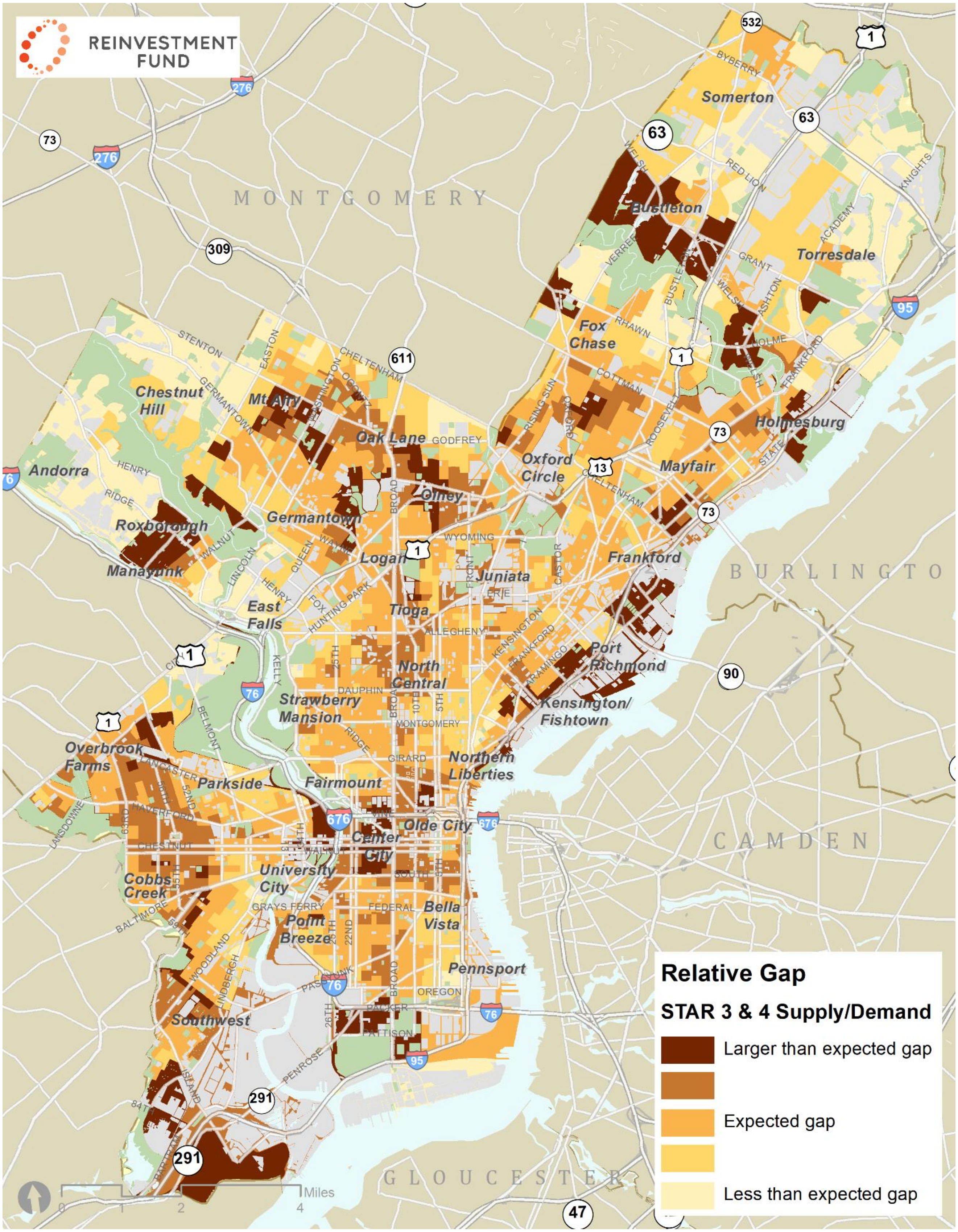

Figure A7 shows changes in the relative shortage of high-quality supply since 2014 and areas with much larger than expected shortages of high-quality supply in 2018. Areas outlined in maroon experienced much larger than expected shortages in 2018. The Bustleton area experienced a substantial increase in relative shortage and was classified as having much larger than expected shortages of high-quality supply in 2018.

Figure A7: Change in Relative Gap – High-Quality Childcare Supply (2014-2018)

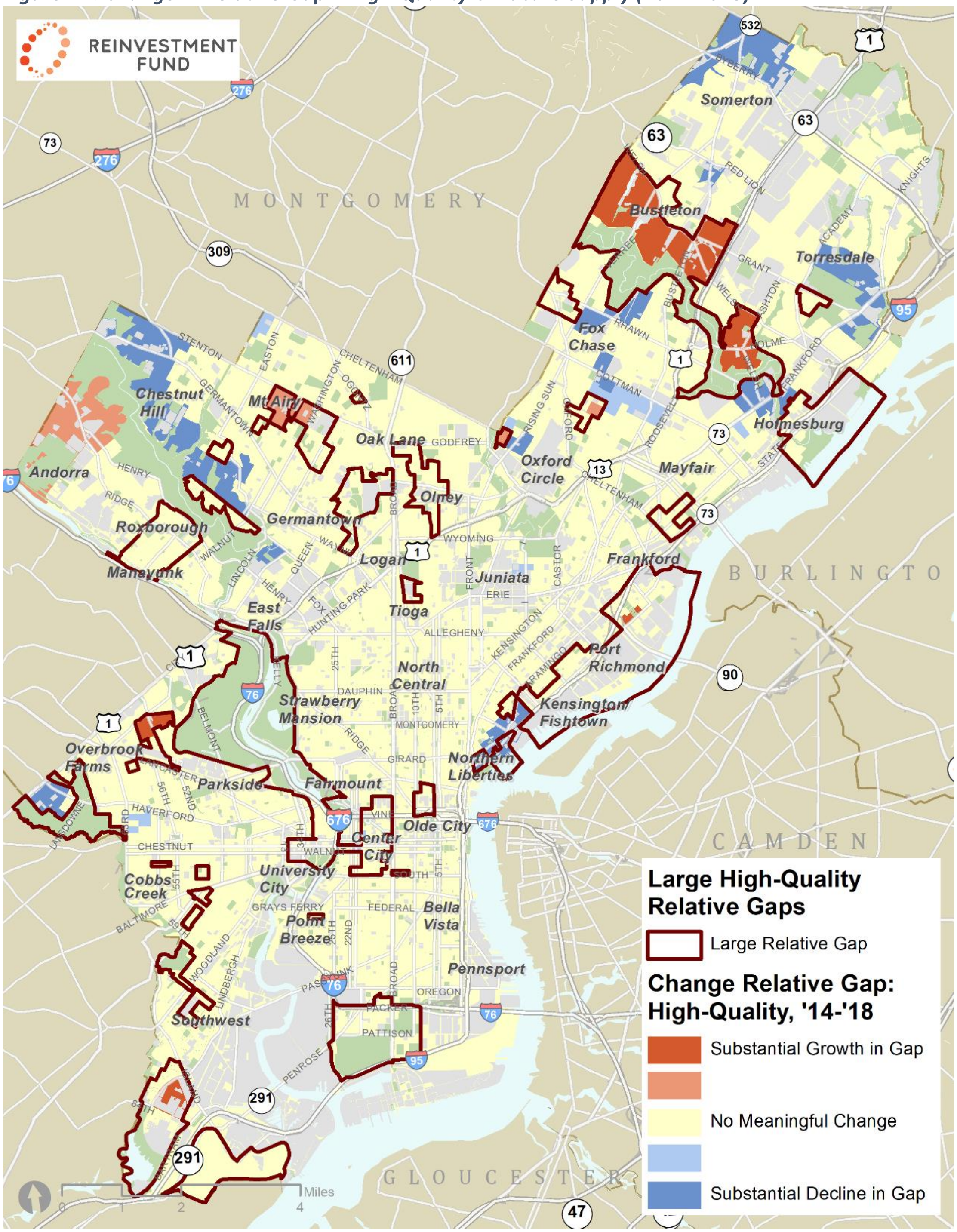

Table A2: Demographic/Economic Characteristics of Areas for Total, Certified, and High-Quality Childcare Supply

The table summarizes information by rows. For example, of all block groups with a family poverty rate of 10 percent or less, 20 percent has very low supply. Supply classifications are based on percentile rank: Very Low Supply (0–10 percent); Low Supply (10-30 percent); Moderate Supply (30-70 percent); High Supply (70-90 percent) and Very High Supply (90-100 percent).

- Block groups with elevated poverty levels and African American populations, and those near train stops tended to have more supply across ***all*** supply measures.

	Very Low Supply	Low Supply	Moderate Supply	High Supply	Very High Supply	Total
ALL SUPPLY						
(1) <10% Family Poverty	20%	26%	34%	15%	5%	100%
(2) 10% - 20% Family Poverty	10%	21%	44%	16%	10%	100%
(3) 20% - 40% Family Poverty	2%	18%	45%	24%	11%	100%
(4) >40% Family Poverty	2%	9%	40%	29%	20%	100%
(1) <10% African American	23%	28%	30%	16%	4%	100%
(2) 10-25% African American	17%	29%	38%	10%	6%	100%
(3) 25-50% African American	4%	28%	41%	21%	6%	100%
(4) 50-75% African American	3%	13%	48%	24%	11%	100%
(5) 75-90% African American	2%	12%	45%	22%	19%	100%
(6) 90-100% African American	2%	6%	47%	29%	17%	100%
(1) 0.00-0.25 Mi to Nearest Train Station	5%	11%	34%	32%	18%	100%
(2) 0.25-0.50 Mi to Nearest Train Station	6%	16%	38%	27%	13%	100%
(3) 0.50-0.75 Mi to Nearest Train Station	7%	21%	43%	20%	10%	100%
(4) 0.75-1.00 Mi to Nearest Train Station	15%	19%	47%	15%	4%	100%
(5) > 1 Mi to Nearest Train Station	20%	32%	39%	5%	3%	100%
CERTIFIED SUPPLY						
(1) <10% Family Poverty	19%	27%	35%	14%	4%	100%
(2) 10% - 20% Family Poverty	10%	22%	43%	16%	10%	100%
(3) 20% - 40% Family Poverty	3%	18%	45%	24%	11%	100%
(4) >40% Family Poverty	2%	7%	39%	32%	20%	100%
(1) <10% African American	22%	27%	32%	14%	4%	100%
(2) 10-25% African American	17%	26%	37%	12%	7%	100%
(3) 25-50% African American	4%	25%	41%	24%	6%	100%
(4) 50-75% African American	3%	15%	47%	22%	13%	100%
(5) 75-90% African American	3%	12%	45%	24%	17%	100%
(6) 90-100% African American	2%	10%	45%	27%	16%	100%
(1) 0.00-0.25 Mi to Nearest Train Station	5%	11%	33%	31%	19%	100%
(2) 0.25-0.50 Mi to Nearest Train Station	7%	15%	36%	29%	13%	100%
(3) 0.50-0.75 Mi to Nearest Train Station	6%	22%	45%	18%	10%	100%
(4) 0.75-1.00 Mi to Nearest Train Station	15%	19%	50%	14%	3%	100%
(5) > 1 Mi to Nearest Train Station	21%	33%	38%	5%	3%	100%
HIGH-QUALITY SUPPLY						
(1) <10% Family Poverty	16%	26%	35%	17%	6%	100%
(2) 10% - 20% Family Poverty	11%	23%	42%	18%	7%	100%
(3) 20% - 40% Family Poverty	6%	18%	46%	20%	10%	100%
(4) >40% Family Poverty	2%	8%	37%	30%	22%	100%
(1) <10% African American	19%	20%	32%	17%	12%	100%
(2) 10-25% African American	13%	24%	31%	18%	15%	100%
(3) 25-50% African American	5%	19%	45%	20%	12%	100%
(4) 50-75% African American	3%	19%	40%	26%	13%	100%
(5) 75-90% African American	7%	17%	44%	25%	6%	100%
(6) 90-100% African American	3%	22%	51%	20%	4%	100%
(1) 0.00-0.25 Mi to Nearest Train Station	7%	12%	41%	22%	18%	100%
(2) 0.25-0.50 Mi to Nearest Train Station	9%	17%	38%	25%	11%	100%
(3) 0.50-0.75 Mi to Nearest Train Station	8%	22%	40%	19%	12%	100%
(4) 0.75-1.00 Mi to Nearest Train Station	12%	21%	38%	23%	6%	100%
(5) > 1 Mi to Nearest Train Station	16%	29%	42%	10%	3%	100%

Table A3: Average Block Group (BG) Demand for Child Care by Demographic and Economic Characteristics

- On average, a block group in Philadelphia has 81 children between the ages of zero to four and a commuter adjusted demand of 85.
- Block groups with elevated family poverty rates, lower incomes, a moderate share of African Americans, or near train stops tended to have elevated demand compared to the citywide average.

	Average Baseline Demand	Average Commuter Adjusted Demand	Average Maximum Potential Demand within ½ mile of BG	Average Total Supply within ½ mile of BG
All BG	81	85	2,790	1,595
(1) <10% Family Poverty	66	77	2,566	1,294
(2) 10% - 20% Family Poverty	83	85	2,541	1,533
(3) 20% - 40% Family Poverty	89	86	2,870	1,767
(4) >40% Family Poverty	100	97	3,388	2,020
(1) <10% African American	73	84	2,906	1,184
(2) 10-25% African American	90	104	2,999	1,311
(3) 25-50% African American	93	98	3,157	1,542
(4) 50-75% African American	86	82	2,677	1,779
(5) 75-90% African American	85	81	2,547	1,982
(6) 90-100% African American	72	65	2,426	2,034
(1) Low Income < (50% AMI)	94	91	3,243	2,042
(2) Low-Middle Income (50% - 80% AMI)	91	91	3,068	1,868
(3) Middle Income (80% - 100% AMI)	94	90	2,757	1,703
(4) High Income (>100% AMI)	72	82	2,537	1,281
(1) 0.00-0.25 Mi to Nearest Train Station	72	107	3,388	1,981
(2) 0.25-0.50 Mi to Nearest Train Station	77	80	2,968	1,799
(3) 0.50-0.75 Mi to Nearest Train Station	80	75	2,716	1,594
(4) 0.75-1.00 Mi to Nearest Train Station	85	79	2,543	1,403
(5) > 1 Mi to Nearest Train Station	90	87	2,291	1,115

Table A4: Average Block Group (BG) Supply of Child Care by Demographic and Economic Characteristics

- On average, a block group in Philadelphia has two childcare sites and one certified site.
- Access to high-quality childcare is most frequently found within ½ mile of high poverty areas and low-income areas.

	Average Number of Childcare Facilities in BG	Average Certified (OCDEL) supply Within 1/2 Mile of BG	Percent of Supply that is Certified	Average Number of Certified Sites in BG	Average Capacity in High-Quality Sites Within 1/2 Mile of BG	Percent of Total Supply Within 1/2 Mile of BG that is High-Quality	Percent of Certified Within 1/2 Mile of BG that is High-Quality
All BG	2	1,333	84%	1	496	31%	37%
(1) <10% Family Poverty	1	1,060	82%	1	395	31%	37%
(2) 10% - 20% Family Poverty	2	1,269	83%	1	441	29%	35%
(3) 20% - 40% Family Poverty	2	1,468	83%	2	519	29%	35%
(4) >40% Family Poverty	2	1,765	87%	2	739	37%	42%
(1) <10% African American	1	1,016	86%	1	465	39%	46%
(2) 10-25% African American	1	1,139	87%	1	510	39%	45%
(3) 25-50% African American	2	1,303	84%	1	530	34%	41%
(4) 50-75% African American	2	1,498	84%	2	551	31%	37%
(5) 75-90% African American	3	1,616	82%	2	510	26%	32%
(6) 90-100% African American	2	1,647	81%	2	463	23%	28%
(1) Low Income < (50% AMI)	2	1,798	88%	1	765	37%	43%
(2) Low-Middle Income (50% - 80% AMI)	2	1,575	84%	2	561	30%	36%
(3) Middle Income (80% - 100% AMI)	3	1,402	82%	2	487	29%	35%
(4) High Income (>100% AMI)	1	1,050	82%	1	391	31%	37%

(1) 0.00-0.25 Mi to Nearest Train Station	2	1,665	84%	2	619	31%	37%
(2) 0.25-0.50 Mi to Nearest Train Station	2	1,505	84%	1	551	31%	37%
(3) 0.50-0.75 Mi to Nearest Train Station	2	1,338	84%	1	497	31%	37%
(4) 0.75-1.00 Mi to Nearest Train Station	2	1,172	84%	1	443	32%	38%
(5) > 1 Mi to Nearest Train Station	1	917	82%	1	351	31%	38%

Table A5: Demographic/Economic Characteristics of Areas by Level of Demand

Table A5 should be read across each row. For example, of all block groups with a family poverty rate of 10 percent or less, 19 percent has very low demand. Demand classifications are based on percentile rank: Very Low Demand (0–10 percent); Low Demand (10-30 percent); Moderate Demand (30-70 percent); High Demand (70-90 percent) and Very High Demand (90-100 percent).

- Block groups with higher poverty rates tended to have high demand.
- Block groups that had a moderate level of African Americans tended to have high demand.

	Very Low Demand	Low Demand	Moderate Demand	High Demand	Very High Demand	Total
(1) <10% Family Poverty	19%	31%	29%	11%	10%	100%
(2) 10% - 20% Family Poverty	10%	21%	47%	19%	3%	100%
(3) 20% - 40% Family Poverty	5%	13%	49%	26%	7%	100%
(4) >40% Family Poverty	0%	8%	41%	29%	21%	100%
(1) <10% African American	17%	23%	29%	15%	16%	100%
(2) 10-25% African American	11%	20%	34%	18%	17%	100%
(3) 25-50% African American	7%	13%	31%	33%	16%	100%
(4) 50-75% African American	7%	17%	43%	28%	4%	100%
(5) 75-90% African American	6%	21%	52%	20%	1%	100%
(6) 90-100% African American	6%	23%	56%	14%	1%	100%
(1) 0.00-0.25 Mi to Nearest Train Station	11%	11%	35%	23%	20%	100%
(2) 0.25-0.50 Mi to Nearest Train Station	9%	16%	42%	20%	14%	100%
(3) 0.50-0.75 Mi to Nearest Train Station	9%	19%	40%	24%	8%	100%
(4) 0.75-1.00 Mi to Nearest Train Station	8%	19%	52%	18%	3%	100%
(5) > 1 Mi to Nearest Train Station	14%	36%	33%	15%	3%	100%

Table A6: Demographic/Economic Characteristics of Areas for Relative Shortages in Total, Certified, and High-Quality Child Care

Table A6 should be read across each row. For example, of all block groups with a family poverty rate of 10 percent or less, 17 percent has much larger than expected shortage.

- A plurality of block groups with high poverty rates tended to have expected relative gaps across all three supply measures. In general, more low poverty block groups had “much larger than expected shortages” than block groups with high poverty rates.
- Although block groups with at least a 75 percent African American population tended to have lower gaps in total child care, gaps for predominantly African American areas were more severe for certified and high-quality child care.
- Most block groups farther than one mile from a train station tended to have high relative gaps in total supply, while the relative gaps in high-quality supply were less severe, suggesting that some high-quality options are available in these areas.

	Much Larger than Expected Shortage	Larger than Expected Shortage	Expected Shortage	Less than Expected Shortage	Much Less than Expected Shortage	Total
ALL SUPPLY						
(1) <10% Family Poverty	17%	21%	37%	18%	8%	100%
(2) 10% - 20% Family Poverty	11%	17%	43%	16%	13%	100%
(3) 20% - 40% Family Poverty	4%	19%	42%	25%	9%	100%
(4) >40% Family Poverty	5%	21%	40%	22%	12%	100%

	Much Larger than Expected Shortage	Larger than Expected Shortage	Expected Shortage	Less than Expected Shortage	Much Less than Expected Shortage	Total
(1) <10% African American	21%	30%	40%	8%	1%	100%
(2) 10-25% African American	13%	35%	42%	8%	1%	100%
(3) 25-50% African American	11%	28%	39%	19%	3%	100%
(4) 50-75% African American	3%	14%	47%	27%	10%	100%
(5) 75-90% African American	2%	6%	42%	27%	24%	100%
(6) 90-100% African American	2%	2%	34%	37%	26%	100%
(1) 0.00-0.25 Mi to Nearest Train Station	3%	19%	41%	24%	12%	100%
(2) 0.25-0.50 Mi to Nearest Train Station	5%	17%	44%	25%	10%	100%
(3) 0.50-0.75 Mi to Nearest Train Station	11%	17%	39%	25%	9%	100%
(4) 0.75-1.00 Mi to Nearest Train Station	13%	20%	40%	15%	12%	100%
(5) > 1 Mi to Nearest Train Station	20%	29%	35%	8%	8%	100%
CERTIFIED SUPPLY						
(1) <10% Family Poverty	12%	21%	30%	19%	18%	100%
(2) 10% - 20% Family Poverty	13%	19%	38%	21%	10%	100%
(3) 20% - 40% Family Poverty	9%	23%	47%	16%	4%	100%
(4) >40% Family Poverty	4%	14%	52%	28%	2%	100%
(1) <10% African American	9%	15%	24%	31%	21%	100%
(2) 10-25% African American	8%	7%	34%	32%	20%	100%
(3) 25-50% African American	6%	19%	48%	23%	5%	100%
(4) 50-75% African American	4%	19%	60%	14%	3%	100%
(5) 75-90% African American	15%	28%	46%	10%	1%	100%
(6) 90-100% African American	15%	32%	47%	5%	1%	100%
(1) 0.00-0.25 Mi to Nearest Train Station	9%	33%	39%	16%	3%	100%
(2) 0.25-0.50 Mi to Nearest Train Station	10%	28%	37%	19%	7%	100%
(3) 0.50-0.75 Mi to Nearest Train Station	9%	15%	47%	20%	9%	100%
(4) 0.75-1.00 Mi to Nearest Train Station	8%	11%	46%	25%	11%	100%
(5) > 1 Mi to Nearest Train Station	15%	10%	33%	21%	21%	100%
HIGH-QUALITY SUPPLY						
(1) <10% Family Poverty	15%	16%	29%	21%	20%	100%
(2) 10% - 20% Family Poverty	10%	20%	42%	21%	8%	100%
(3) 20% - 40% Family Poverty	6%	25%	46%	18%	4%	100%
(4) >40% Family Poverty	5%	22%	52%	20%	1%	100%
(1) <10% African American	17%	13%	31%	20%	19%	100%
(2) 10-25% African American	9%	13%	41%	24%	12%	100%
(3) 25-50% African American	7%	17%	52%	16%	7%	100%
(4) 50-75% African American	6%	20%	44%	24%	7%	100%
(5) 75-90% African American	8%	25%	43%	20%	3%	100%
(6) 90-100% African American	6%	33%	39%	17%	4%	100%
(1) 0.00-0.25 Mi to Nearest Train Station	10%	30%	39%	16%	5%	100%
(2) 0.25-0.50 Mi to Nearest Train Station	10%	22%	44%	18%	6%	100%
(3) 0.50-0.75 Mi to Nearest Train Station	8%	19%	45%	22%	6%	100%
(4) 0.75-1.00 Mi to Nearest Train Station	8%	15%	46%	24%	7%	100%
(5) > 1 Mi to Nearest Train Station	13%	14%	25%	21%	27%	100%

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