



REINVESTMENT
FUND



LIMITED SUPERMARKET
ACCESS ANALYSIS

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2022 grocery store records were provided by Nielsen TD Linx.

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REINVESTMENT
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Limited Supermarket Access Analysis –

National Summary



Limited Supermarket Access Analysis –

National Summary

For over a decade, Reinvestment Fund's Limited Supermarket Access (LSA) Analysis has guided strategic decision-making to increase access to fresh foods for residents living in places with inadequate and inequitable access to grocery stores. In addition to the most up-to-date store data, the 2023 update to the LSA analysis incorporates methodological refinements informed by policymakers, food access advocates, grocers, and researchers across the country. For the first time, the LSA analysis results are comparable across the entire country to accurately identify limited, and inequitable, access to full-service supermarkets in America's cities, suburbs, small towns, and rural communities.



Key findings from the 2023 update to the LSA analysis include:

1. Nationally, the share of the population living in Limited-Access Areas has remained stable between 2013 and 2022, at roughly 8.5% of the overall population.
2. The share of the population living in Limited-Access Areas ranged from nearly 12% of the population in Urban areas to just below 5% in the most Remote parts of the country.
3. In Urban, Rural, and Remote parts of the country, people living in low-income communities tend to be over-represented in Limited-Access Areas, while in Small Towns and Rural places people living in middle-income communities tend to be over-represented in Limited-Access Areas.

Limited-Access Areas

are single block groups, or collections of block groups, where residents must travel almost twice as far to a full-service supermarket as a resident in a block group with similar population density and a median household income that is at least 120% of the area median.



4. Black, Latino, and Asian residents are disproportionately concentrated in Limited-Access Areas in Urban areas, Small Towns, Rural and Remote parts of the country. In the most Remote parts of the country, Native American populations are heavily over-represented in Limited-Access Areas.
5. Utah, Nevada, Texas, Colorado, and Delaware are the states with the biggest increases in the number of residents living in Limited-Access Areas between 2013 and 2022. These states are also experiencing population growth and the food retail environment may still be catching up to serve the new population. Wyoming, Ohio, Missouri, West Virginia, and Vermont saw the biggest decreases in the number of residents living in Limited-Access Areas.
6. Provo/Orem, UT; Charleston/North Charleston, SC; Cape Coral/Fort Meyers, FL; Austin/Round Rock/Georgetown, TX; and Ogden/Clearfield, UT are the metropolitan regions with the biggest increases in Limited-Access residents. As with the state-level analysis, these metropolitan areas experienced population gains during this time. Akron, OH; Cleveland/Elyria, OH; Scranton/Wilkes-Barre, PA; Syracuse, NY; and Dayton/Kettering, OH saw the biggest decreases in the number of residents living in Limited-Access Areas.

In 2022, roughly 27.8 million people (8.5% of the population) lived in a Limited-Access Area; 9.1 million people living in Limited-Access Areas also live in low-income communities. Limited-Access Areas exist in all types of communities, but Urban and Suburban areas had the greatest shares of their populations living in neighborhoods with insufficient access to supermarkets in 2022. Table 1 presents the total population and share of the population living in Limited-Access Areas in Urban, Suburban, Small Town, Rural, and Remote parts of the country from 2013 to 2022.

Table 1. Limited Access Populations by Community Type: 2013 to 2022

Community Type	Total Population	% of Population Living in Low-Access Areas - 2013	% of Population Living in Low-Access Areas - 2017	% of Population Living in Low-Access Areas - 2022
Urban	104,380,147	12.5%	12.2%	11.9%
Suburban	138,053,139	6.4%	6.5%	7.2%
Small Town	16,635,943	5.5%	5.7%	6.0%
Rural	63,647,301	7.9%	6.3%	6.5%
Remote	3,338,994	5.7%	5.3%	4.8%
Insufficient Data	513,784			
National	326,569,308	8.5%	8.2%	8.5%

Urban, Rural and Remote communities experienced small declines in the share of their population living in Limited-Access Areas since 2013, while Suburban and Small Towns experienced increases.

Updates to the 2023 LSA Analysis Provide Additional Nuance to Inform Local Strategies to Enhance Access to Healthy Foods

The 2023 update to the LSA divides Limited-Access Areas into three distinct types that correspond to different approaches to meeting the needs of people living in different communities across the country. These Limited-Access Area types provide additional context about opportunities to improve access to full-service supermarkets and other types of healthy food retail outlets. They include:



- 1. Limited Supermarket Access (LSA) Areas.** About 13.3 million people live in LSA Areas. These are adjacent block groups that, when combined, have at least 5,000 residents who need to travel almost twice as far to a full-service supermarket compared to residents in block groups with similar population density, and above average incomes. LSA Areas are places that may be well suited to traditional brick and mortar food retail.
- 2. Limited-Access/Low-Population Areas.** About 14.1 million people live in Limited-Access/Low Population Areas. Limited-Access/Low Population Areas have fewer residents than LSA Areas. They are single block groups with between 1,000 and 5,000 residents who need to travel almost twice as far as residents living in block groups with similar population density and above average incomes. Food access interventions in these areas would need to be tailored to the local market and cultural context, but could potentially support expanded food retail opportunities, smaller format stores, or other approaches to augment the local food system.
- 3. Limited-Access/Low-Density Areas.** 160,231 residents live in Limited-Access/Low Density Areas. These are single block groups with at least 1,000 residents who need to travel almost twice as far as residents living in block groups with similar population density and above average incomes, and that are in Remote community types. Given the low population and population density of these places, innovative interventions like mobile markets or alternative ownership models may be more financially viable than traditional large format, full-service markets.

Table 2 presents the share of residents living in each of the different types of Limited-Access Areas across Urban, Suburban, Small Town, Rural, and Remote parts of the country.

Table 2. Limited-Access Populations by Limited-Access Area Types and Community Types

Community Type	Total Under-Served Population*	% Under-Served Population Living in LSA Areas	% Under-Served Population Living in Limited-Access/Low-Population Areas	% Under-Served Population Living in Limited-Access/Low-Density Population Areas
Urban	12,424,095	42%	58%	0%
Suburban	9,953,666	58%	42%	0%
Small Town	1,001,707	31%	69%	0%
Rural	4,161,498	48%	49%	3%
Remote	160,231	0%	0%	100%
National	27,701,197	48%	51%	1%

**Individuals living in under-served areas below the population thresholds for Limited-Access Areas are not included.*

Access to Healthy Food Varies Across Areas Differentiated by Resident Household Income

The incomes of residents living in Limited-Access Areas vary across the spectrum of Urban to Remote parts of the country. Tables 3 and 4 present the number and share of residents living in low- and middle- income block groups, along with an Income Disparity Ratio.

The Income Disparity Ratio is a comparison between the share of the population living in Limited-Access Areas in low- and middle-income block groups to the share of the overall population living in low- or middle-income block groups. If the ratio is higher than 1.00, the Limited-Access population is disproportionately concentrated in low or middle-income communities. If the ratio is less than 1.00, low-income or middle-income areas can be considered served in proportion to their presence in the population.

1. Low-income block groups have a median household income that is less than 80% the median household income of either the metro or state. Middle Income block groups have a median household income that is between 80% and 120% of the area median income of either the metro or state.

Table 3. Limited-Access Populations in Low-Income Areas, by Community Type

Community Type	Total Population, 2020	% Population Living in Low Income Areas, 2020	Low Access Population, 2020	% of Low Access Population Living in Low Income Areas, 2020	Low-Income Disparity Ratio, 2020
Urban	104,380,147	41.0%	12,424,095	54.0%	1.32
Suburban	138,053,139	21.5%	9,953,666	11.4%	0.53
Small Town	16,635,943	37.7%	1,001,707	20.1%	0.54
Rural	63,647,301	19.8%	4,161,498	23.0%	1.16
Remote	3,338,994	30.6%	160,231	48.8%	1.59
Insufficient Data	513,784				
National	326,569,308	28.3%	27,701,197	32.8%	1.16

Overall, roughly a third (32.8%) of all people living in Limited-Access Areas live in low-income communities, higher than the share of all residents living in low-income communities (28.3%). As a result, roughly 1,226,221 more low-income residents have Limited-Access to supermarkets than would be expected if access to grocery stores was evenly distributed across all income levels. In Urban (54%), Rural (23%) and Remote (49%) parts of the country, people living in Limited-Access Areas are disproportionately concentrated in low-income communities.

Table 4. Limited-Access Populations in Middle-Income Areas, by Community Type

Community Type	Total Population, 2020	% Population Living in Middle Income Areas, 2020	Limited-Access Population, 2020	% of Limited-Access Population Living in Middle Income Areas, 2020	Middle-Income Disparity Ratio, 2020
Urban	104,380,147	31.8%	12,424,095	23.80%	0.75
Suburban	138,053,139	31.0%	9,953,666	28.10%	0.91
Small Town	16,635,943	38.7%	1,001,707	44.60%	1.15
Rural	63,647,301	42.5%	4,161,498	47.80%	1.12
Remote	3,338,994	48.5%	160,231	44.10%	0.91
Insufficient Data	513,784		-		-
National	326,569,308	34.01%	27,701,197	29.83%	0.88

Overall, about 30% of all people living in Limited-Access Areas live in middle-income communities, which is less than the share of all residents living in middle-income communities (34%); it is also slightly below the percentage for low-income residents observed in Table 3. However, in Small Towns (45%) and Rural communities (48%), people living in Limited-Access Areas are disproportionately concentrated in middle-income communities.

Access to Healthy Food Varies Across Different Racial and Ethnic Groups

The racial and ethnic composition of Limited-Access Areas varies across different types of places across the country. A Race/Ethnicity Disparity Ratio compares the share of the Black, Latino, Asian, Native American, and Other or More than One Race (Black and Brown) population living in Limited-Access Areas in a community to the share of the Black and Brown population in that type of community overall.

Table 5 presents the share of Black and Brown residents living in Limited-Access Areas, along with a Racial/Ethnic Disparity Ratio by community type. Community types with a Race/Ethnicity ratio higher than 1.00 have a disproportionate share of Black and Brown residents living in Limited-Access Areas.

Table 5. Share of the Black and Brown Population in Limited-Access Areas by Community Type

Community Type	Total Population, 2020	% Population that is Black, Latino, Asian, Native American, More than Two Races 2020	Limited-Access Population, 2020	% of Limited-Access Population that is Black, Latino, Asian, Native American, More than Two Races, 2020	Race/Ethnicity Disparity Ratio, 2020
Urban	104,380,147	52.9%	12,424,095	63.5%	1.20
Suburban	138,053,139	33.6%	9,953,666	30.1%	0.90
Small Town	16,635,943	26.8%	1,001,707	32.7%	1.22
Rural	63,647,301	17.6%	4,161,498	20.2%	1.14
Remote	3,338,994	21.3%	160,231	42.2%	1.98
Insufficient Data	513,784	47.5%	-		
National	326,569,308	36.2%	27,701,197	43.8%	1.21

Overall, roughly 44% of all people living in Limited-Access Areas were Black and Brown, which is substantially higher than the share of all Black and Brown residents throughout the country (36%). Black and Brown residents are disproportionately concentrated in Limited-Access Areas in Urban areas, Small Towns, Rural and Remote parts of the country. Remote areas have the highest Race/Ethnicity Disparity Ratio of 1.98, indicating that the share of Black and Brown residents living in Limited-Access Areas is roughly twice as large as the share of Black and Brown residents living in the most Remote parts of the country overall.

Table 6 presents the overall share of residents from different racial and ethnic groups living in Limited-Access Areas in different types of communities across the country.

Table 6. Limited-Access Populations by Race/Ethnicity and Community Type²

Community Type	Total Population, 2020	% of Total Population Limited-Access	% of White Population with Limited-Access	% of Black Population with Limited-Access	% of Asian Population with Limited-Access	% of Native American Population with Limited-Access	% of All Other Races (Including Two or More Races) Population with Limited-Access	% Of Latino/Hispanic Population with Limited-Access
Urban	104,380,147	12%	11%	18%	9%	23%	12%	10%
Suburban	138,053,139	7%	8%	5%	4%	11%	6%	7%
Small Town	16,635,943	6%	6%	5%	10%	11%	8%	7%
Rural	63,647,301	7%	6%	6%	4%	15%	7%	7%
Remote	3,338,994	5%	4%	2%	7%	15%	5%	7%
Insufficient Data	513,784	0	0	0	0	0	0	0

Access to supermarkets varies by race across the different community types. But in all community types, Native Americans are over-represented in Limited-Access Areas compared to the community at large. In Urban communities, Black residents are also overrepresented in Limited-Access Areas. In Small Town communities, Asian residents, and residents of Other or More than One Race are also overrepresented in Limited-Access Areas. In Remote communities, Hispanic residents are also overrepresented.

². Throughout this report White, Black, Asian, Native American and all other races including two or more races only include non-Hispanic individuals. The Hispanic/Latino category contains all individuals identifying as Hispanic/Latino regardless of race.



Conclusions and Use Cases

Reinvestment Fund's Limited Supermarket Access analysis is a unique tool designed to help a wide range of food access stakeholders identify areas that have both inadequate and inequitable access to healthy food and sufficient market demand to support new or expanded food retail operations. The 2023 update increases the utility of this tool by expanding the geographic application of the analysis to the entire United States, and by incorporating the most recent data available related to supermarket locations, sales, and socio-demographics. It also differentiates Limited-Access Area types so that policymakers, practitioners, investors, and local stakeholders can fashion appropriate strategies to address local issues.

The 2023 LSA update shows that the nation's Limited-Access population has remained relatively stable between 2013 and 2022, with roughly 8.5% of all residents living in Limited-Access Areas. While access to healthy food in the United States overall has remained relatively stable over the past decade, there have been uneven improvements and setbacks with respect to supermarket access in different parts of the country, and for people from different racial and ethnic backgrounds.

Urban areas continue to see overall declines in the share of their residents living in Limited-Access Areas. However, Urban areas also continue to be where the greatest number, and percentage of residents, have limited access to grocery stores. In Urban, Rural, and Remote parts of the country, people living in Limited-Access Areas are disproportionately Black, Hispanic, or Native American (in Remote areas) and tend to live in low-income communities. Additionally, in Small Towns and Rural parts of the country, a substantial share of residents living in Limited-Access Areas live in middle-income communities, suggesting that limited access to fresh food is not just an issue for low-income individuals and families.

CDFIs and others interested in improving access to healthy food can use the results from the LSA analysis to identify areas of focus, and to identify interventions that could be most appropriate to alleviate low-access issues in different parts of the country. These results can help individuals and organizations strategically target their investments in new and expanded food retail operations to maximize their impact. The following Appendix provides an overview of the methodology, data sources, and more detailed results from the 2023 update to the LSA. In addition, two “Use Cases” provide examples of how the LSA can help provide a nuanced picture of local food retail markets that can inform decision-making about the most appropriate interventions to meet the needs of people living in Limited-Access Areas.

Please visit [PolicyMap](#) to find complete results of the 2023 LSA Analysis.



Appendix

Appendix

The LSA analysis measures access to healthy food by identifying areas that are well-served by supermarkets and those that have relatively limited and inequitable access to supermarkets. Reinvestment Fund uses supermarkets (grocery stores with at least \$2 million in annual sales) as a proxy for healthy food access because a review of the relevant research suggests that supermarkets, compared to smaller stores (e.g., corner stores), most consistently offer the greatest variety of healthy foods at the lowest prices.⁶

Access means different things in different places. In densely populated urban areas, supermarkets tend to be located more closely together, and a neighborhood may have relatively limited access if its nearest store is a mile or two away. In rural areas, many, if not most, communities are miles from the nearest supermarket. To account for this variation, Reinvestment Fund assigns every census block group in all 50 states and the District of Columbia to one of eleven classes based on that block group's location in a Metro or non-Metro County, and population density; for densely populated block groups in Metro Counties, car ownership rates further differentiate block groups.

Within each class, Reinvestment Fund calculates the typical street-network distance traveled to the nearest supermarket by residents of well-served block groups, i.e., block groups with median household incomes at or above 120 percent of metropolitan or state median household income. This reference distance is used under the assumption that in a functioning market, there will generally exist an adequate complement of amenities, like supermarkets, in areas where incomes are above average.

Each block group is then assigned an Access Score, which represents the percentage by which that block group's distance to the nearest supermarket would need to be reduced to equal the typical distance for well-served block groups in that class. Block groups with Access Scores greater than or equal to 45 are considered Limited-Access. In those Limited-Access block groups, ***residents must travel almost twice as far to a supermarket as residents in well-served block groups with similar population density (and car ownership, in the most densely populated block groups).***

6. Barriers to Buying Healthy Foods for People With Diabetes: Evidence of Environmental Disparities - PMC (nih.gov)

In this update, Reinvestment Fund made the following enhancements to the LSA analysis methodology compared to our prior analyses ⁷

- **Expanded Geography.** Previous versions of the LSA analysis were only estimated for the lower 48 states and the District of Columbia. The 2023 LSA includes all 50 states as well as the District of Columbia. The 2023 LSA update also adapted the LSA methodology to be applicable to all places across the country, based on learnings from the 2018 Rural Supplement, along with feedback provided by practitioners, grocers, and other researchers across the country.⁸
- **Population density and car ownership classes assigned for Metro and Non-Metro Counties.** Based on feedback from practitioners, grocers, and other researchers the creation of the population and car-ownership classes were done separately for Metro and non-Metro Counties to provide stable comparisons for the calculation of appropriate reference distances and the designation of Limited-Access Areas at different geographic scales.
- **Updated timeframe for the longitudinal analyses.** The timeframe for this analysis is 2013 to 2022 and includes snapshots for three time periods that combine store location records with five-year American Community Survey estimates of population density and car ownership. Time One relies on store locations for 2013 combined with ACS records from 2006-10; Time Two relies on store locations for 2017 combined with ACS records for 2011-15; and Time Three relies on store locations for 2022 combined with ACS records for 2016-20. Each time period uses the same methodology so stakeholders can use these multiple time points to understand how food access has changed in their areas of interest over the last 10 years.
- **Expanded Definition for Limited-Access Areas.** The inclusion of non-Metro Counties along with feedback from received from the previous LSA Update informed the creation of three different Limited-Access Areas that potentially imply distinct types of interventions to meet the food access needs of people living in these places.

7. https://www.reinvestment.com/wp-content/uploads/2022/02/LSA_2018_Report_web.pdf

8. <https://www.reinvestment.com/wp-content/uploads/2022/02/Reinvestment-Fund-Rural-Food-Access-Investment-Area-Analysis-report-1.pdf>

Limited Supermarket Areas (LSA Areas) These are block groups that when combined have at least 5,000 residents who need to travel almost twice as far for a full-service supermarket relative to residents in block groups with similar population density, and above average incomes. LSA areas are places that may be well suited to traditional brick and mortar food retail.

Limited-Access/Low-Population Areas are single block groups with between 1,000 and 5,000 residents who need to travel almost twice as far as residents living in block groups with similar population density and above average incomes. Limited-Access/Low Population Areas have fewer residents than LSA areas and tend to be located in denser parts of the country. Food access interventions in these areas would need to be tailored to the local market and cultural context, but could potentially support expanded food retail opportunities, smaller format stores, or other approaches to augment the local food system.

Limited-Access/Low-Density Areas are block groups with at least 1,000 residents who need to travel almost twice as far as residents living in block groups with similar population density and above average incomes, and that are in the most remote parts of the country. Given the low population and population density of these places, innovative interventions like mobile markets or alternative ownership models may be more financially viable than traditional large format, full-service markets.

Table A1. on the following page presents the updated Community Type and Density Class definitions for the 2023 LSA update.

Table A1. Community type and Density Class Definitions

Community Type	Class	Population Density		% Households without access to a car		Reference Distance (in Miles)	Underserved Threshold (in Miles)	Average distance to Full-Service Grocery (in Miles)	Number of Block Groups	% Block groups that are Low Access	Total Population 2020	Share of population in a Low Access Block Group	Average Block 8 Group Land Area (in Sq miles)
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM								
Urban	Density Class 5 - High Car*	4,986.50	227,398.60	0	14.1	1.0	1.8	0.9	49,067	6%	72,274,787	7.5%	0.2
	Density Class 5 - Low Car	4,987.00	718,125.20	14.1	100	0.4	0.8	0.6	24,936	27%	33,356,397	26.7%	0.1
Suburban	Density Class 4	379.8	4,986.50	n/a	n/a	1.8	3.3	1.6	94,303	7%	141,136,579	7.8%	1
Small Town	Rural Density Class 4a	315.6	1,048.70	n/a	n/a	2.5	4.6	2.3	5,725	10%	7,052,267	9.1%	2.3
	Rural Density Class 4b	1,049.40	44,444.40	n/a	n/a	1.3	2.3	1.2	8,850	6%	9,670,406	7.4%	0.5
Rural	Density Class 1	-	14.7	n/a	n/a	10.5	19.0	9.0	2,854	8%	1,772,784	12.3%	158.1
	Density Class 2	14.7	69.8	n/a	n/a	7.1	12.8	7.3	7,901	7%	9,161,279	6.4%	32.6
	Density Class 3	69.8	379.8	n/a	n/a	4.4	7.9	4.3	19,495	8%	27,865,583	8.0%	9
	Rural Density Class 2	9.5	87.6	n/a	n/a	7.2	13.0	7.7	14,596	10%	16,070,166	8.1%	38.2
	Rural Density Class 3	87.6	315.6	n/a	n/a	4.2	7.6	4.1	7,482	12%	9,236,555	10.9%	8.2
Remote	Rural Density Class 1	-	9.5	n/a	n/a	12.3	22.1	14.6	3,726	14%	3,315,331	12.7%	511.8

**Car ownership is only considered for high density urban areas.*

Table A2. State Limited-Access Population Changes, 2010 to 2020

State	Total Population, 2020	Limited-Access Population Total, 2010	Limited-Access Population Total, 2015	Limited-Access Population Total, 2020	% Change Total Limited-Access Population, 2010 to 2020
Utah	3,271,616	111,130	166,362	223,270	100.90%
Nevada	3,104,614	312,185	387,821	498,284	59.60%
Texas	29,145,505	2,585,944	3,169,039	3,720,058	43.90%
Colorado	5,773,714	409,213	462,265	534,744	30.70%
Delaware	989,948	99,560	108,229	127,863	28.40%
Idaho	1,839,106	80,628	89,455	103,379	28.20%
District of Columbia	21,538,187	1,581,034	1,693,292	2,009,953	27.10%
North Dakota	779,094	48,351	59,016	61,411	27.00%
Washington	7,705,281	624,441	694,143	792,009	26.80%
Montana	1,084,225	54,781	58,660	68,005	24.10%
South Carolina	5,118,425	332,917	297,042	412,197	23.80%
Arizona	7,151,502	725,023	792,391	888,473	22.50%
Oklahoma	4,237,256	220,535	253,852	258,475	17.20%
Minnesota	5,706,494	431,194	460,903	504,239	16.90%
Georgia	10,711,908	829,262	817,137	955,492	15.20%
Kansas	2,937,880	171,412	167,645	197,350	15.10%
North Carolina	10,439,388	661,750	630,257	733,702	10.90%
Indiana	6,785,528	556,912	512,813	616,461	10.70%
Hawaii	1,455,271	228,449	244,529	252,353	10.50%
Nation	331,449,281	25,981,598	26,043,281	28,569,690	10.00%
Kentucky	4,505,836	358,672	359,805	391,562	9.20%
Virginia	8,631,393	607,247	601,554	661,451	8.90%
Alaska	733,391	82,943	80,766	90,135	8.70%
New Mexico	2,117,522	286,464	306,025	311,094	8.60%
New Jersey	9,288,994	1,004,461	977,353	1,084,926	8.00%
Oklahoma	3,959,353	308,327	298,414	332,422	7.80%
Massachusetts	7,029,917	830,276	827,578	892,805	7.50%
Alabama	5,024,279	295,533	249,760	317,280	7.40%
Iowa	3,190,369	153,100	148,551	162,950	6.40%

Table A2. State Limited-Access Population Changes, 2010 to 2020 *continued*

State	Total Population, 2020	Limited-Access Population Total, 2010	Limited-Access Population Total, 2015	Limited-Access Population Total, 2020	% Change Total Limited-Access Population, 2010 to 2020
Arkansas	3,011,524	183,086	173,200	193,227	5.50%
Louisiana	4,657,757	415,357	407,828	437,791	5.40%
Maine	1,362,359	57,956	47,549	60,310	4.10%
California	39,538,223	2,380,519	2,464,554	2,470,759	3.80%
Tennessee	6,910,840	610,751	556,113	633,149	3.70%
Mississippi	2,961,279	245,426	221,214	254,297	3.60%
Rhode Island	1,097,379	91,407	98,320	92,963	1.70%
Nebraska	1,961,504	112,089	97,979	111,346	-0.70%
New Hampshire	1,377,529	175,971	158,442	174,765	-0.70%
Maryland	6,177,224	782,291	740,099	771,796	-1.30%
Connecticut	3,605,944	367,237	348,597	360,423	-1.90%
New Mexico	20,201,249	1,077,091	1,044,528	1,048,108	-2.70%
South Dakota	886,667	67,484	66,964	64,488	-4.40%
District of Columbia	689,545	114,661	114,724	108,064	-5.80%
Pennsylvania	13,002,700	1,225,529	1,096,922	1,136,568	-7.30%
Wisconsin	5,893,718	411,605	385,557	368,854	-10.40%
Illinois	12,812,508	1,072,280	905,974	948,301	-11.60%
Michigan	10,077,331	868,725	723,330	760,797	-12.40%
Wyoming	576,851	33,125	36,524	28,633	-13.60%
Ohio	11,799,448	1,023,036	869,325	823,554	-19.50%
Missouri	6,154,913	407,646	341,443	320,412	-21.40%
West Virginia	1,793,716	237,323	203,834	180,119	-24.10%
Vermont	643,077	29,261	25,607	18,623	-36.40%

Table A3. Major Metropolitan Area Limited-Access Population Changes, 2010 to 2020
Changes in Limited-Access population for Metropolitan Areas with a population of at least 1,000,000.

MSA Name	Total Population, 2020	Limited-Access Population Total, 2010	Limited-Access Population Total, 2015	Limited-Access Population Total, 2020	% Change Total Limited-Access Population, 2010 to 2020
Austin-Round Rock-Georgetown, TX	2,283,371	256,240	375,685	483,472	88.70%
Dallas-Fort Worth-Arlington, TX	7,637,387	480,871	630,316	837,848	74.20%
Orlando-Kissimmee-Sanford, FL	2,673,376	153,163	170,547	265,240	73.20%
Las Vegas-Henderson-Paradise, NV	2,265,461	210,806	242,922	362,450	71.90%
Raleigh-Cary, NC	1,413,982	60,645	75,605	99,329	63.80%
Jacksonville, FL	1,605,848	105,632	98,999	167,643	58.70%
Birmingham-Hoover, AL	1,115,289	48,275	52,406	73,450	52.20%
San Antonio-New Braunfels, TX	2,558,143	324,668	451,162	486,509	49.80%
San Jose-Sunnyvale-Santa Clara, CA	2,000,468	61,453	58,953	91,136	48.30%
Houston-The Woodlands-Sugar Land, TX	7,122,240	533,206	607,584	777,296	45.80%
Indianapolis-Carmel-Anderson, IN	2,111,040	163,451	188,004	234,936	43.70%
Nashville-Davidson--Murfreesboro--Franklin, TN	1,989,519	133,481	156,967	191,711	43.60%
New Orleans-Metairie, LA	1,271,845	99,028	115,752	140,558	41.90%
Tampa-St. Petersburg-Clearwater, FL	3,175,275	208,654	205,472	289,002	38.50%
Providence-Warwick, RI-MA	1,676,579	147,429	182,821	198,844	34.90%
Seattle-Tacoma-Bellevue, WA	4,018,762	311,410	364,591	418,933	34.50%
Salt Lake City, UT	1,257,936	30,055	35,217	40,082	33.40%
Phoenix-Mesa-Chandler, AZ	4,845,832	404,202	462,495	537,865	33.10%
Portland-Vancouver-Hillsboro, OR-WA	2,512,859	125,960	139,274	164,623	30.70%
Oklahoma City, OK	1,425,695	104,313	111,403	136,193	30.60%
Kansas City, MO-KS	2,192,035	84,032	94,320	106,399	26.60%
Sacramento-Roseville-Folsom, CA	2,397,382	169,748	195,477	208,126	22.60%
Minneapolis-St. Paul-Bloomington, MN-WI	3,690,261	308,933	350,008	378,706	22.60%
Atlanta-Sandy Springs-Alpharetta, GA	6,089,815	532,210	589,705	648,961	21.90%
Tucson, AZ	1,043,433	147,594	167,432	179,884	21.90%
Denver-Aurora-Lakewood, CO	2,963,821	216,328	212,095	262,927	21.50%
Charlotte-Concord-Gastonia, NC-SC	2,660,329	127,592	111,012	153,935	20.60%

MSA Name	Total Population, 2020	Limited-Access Population Total, 2010	Limited-Access Population Total, 2015	Limited-Access Population Total, 2020	% Change Total Limited-Access Population, 2010 to 2020
Riverside-San Bernardino-Ontario, CA	4,599,839	309,838	361,145	370,494	19.60%
Washington-Arlington-Alexandria, DC-VA-MD-WV	6,385,162	576,525	602,252	664,345	15.20%
Louisville/Jefferson County, KY-IN	1,285,439	131,625	147,487	150,919	14.70%
Tulsa, OK	1,015,331	71,461	63,416	81,487	14.00%
Richmond, VA	1,314,434	105,075	109,665	118,922	13.20%
Fresno, CA	1,008,654	103,040	103,991	115,268	11.90%
Buffalo-Cheektowaga, NY	1,166,902	115,291	127,495	123,914	7.50%
Grand Rapids-Kentwood, MI	1,087,592	81,118	89,172	87,162	7.50%
Miami-Fort Lauderdale-Pompano Beach, FL	6,138,333	437,512	480,333	469,642	7.30%
New York-Newark-Jersey City, NY-NJ-PA	20,140,470	1,028,926	1,047,838	1,093,910	6.30%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,245,051	665,923	614,091	702,863	5.50%
Urban Honolulu, HI	1,016,508	145,820	170,315	151,177	3.70%
Boston-Cambridge-Newton, MA-NH	4,941,632	617,117	613,770	634,012	2.70%
Rochester, NY	1,090,135	153,089	169,249	156,912	2.50%
San Diego-Chula Vista-Carlsbad, CA	3,298,634	199,765	197,315	200,789	0.50%
Hartford-East Hartford-Middletown, CT	1,213,531	102,786	82,717	102,813	0.00%
Baltimore-Columbia-Towson, MD	2,844,510	372,468	390,678	366,011	-1.70%
Columbus, OH	2,138,926	207,305	208,105	200,022	-3.50%
Chicago-Naperville-Elgin, IL-IN-WI	9,618,502	829,583	792,902	790,284	-4.70%
Pittsburgh, PA	2,370,930	291,249	280,592	263,157	-9.60%
Cincinnati, OH-KY-IN	2,256,884	274,631	234,157	246,564	-10.20%
Virginia Beach-Norfolk-Newport News, VA-NC	1,799,674	166,236	150,002	147,807	-11.10%
San Francisco-Oakland-Berkeley, CA	4,749,008	236,719	234,214	207,455	-12.40%
Los Angeles-Long Beach-Anaheim, CA	13,200,998	676,661	620,337	592,774	-12.40%
Detroit-Warren-Dearborn, MI	4,392,041	462,789	429,009	390,824	-15.60%
Milwaukee-Waukesha, WI	1,574,731	152,583	136,227	126,139	-17.30%
St. Louis, MO-IL	2,820,253	255,292	255,779	209,410	-18.00%
Memphis, TN-MS-AR	1,337,779	156,686	130,724	119,424	-23.80%
Cleveland-Elyria, OH	2,088,251	207,234	175,996	131,377	-36.60%

Table A4. Racial/Ethnic Disparity Ratio by State

Racial/Ethnic Disparity Ratio

The Racial/Ethnic Disparity Ratio compares the share of the Black and Brown population living in a state to the share of the Black and Brown population living in Limited-Access Areas. Tables A4 and A5 present Racial/Ethnic Disparity Ratios by state and metropolitan statistical area. If the ratio is higher than 1.0 then Black and Brown residents are disproportionately living in Limited-Access Areas. Nationally, the Racial/Ethnic Disparity Ratio is 1.12 indicating that across the country, Limited-Access Areas are disproportionately populated by Black and Brown residents.

State	Total Population, 2020	% of Population Who Is Black, Latino, Asian, Native American or Two or More Races	Limited Access Population	% of Limited Access Population Who Is Black, Latino, Asian, Native American or Two or More Races	Racial Disparity Ratio
Maine	1,362,359	9%	60,310	21%	2.42
South Dakota	886,667	19%	64,488	30%	1.55
Wisconsin	5,893,718	21%	368,854	31%	1.53
Pennsylvania	13,002,700	26%	1,185,218	38%	1.49
District of Columbia	689,545	63%	108,064	89%	1.42
Kentucky	4,505,836	17%	391,562	23%	1.37
Indiana	6,785,528	23%	616,461	31%	1.37
Illinois	12,812,508	40%	948,301	53%	1.34
Delaware	989,948	40%	127,863	52%	1.3
Montana	1,084,225	16%	68,005	21%	1.29
Connecticut	3,605,944	35%	360,423	44%	1.28
Michigan	10,077,331	26%	760,797	33%	1.26
Wyoming	576,851	16%	28,633	20%	1.25
Massachusetts	7,029,917	31%	892,805	38%	1.24
Ohio	11,799,448	23%	823,554	27%	1.22
Minnesota	5,706,494	23%	504,239	27%	1.22
Rhode Island	1,097,379	31%	92,963	38%	1.22
North Dakota	779,094	18%	61,411	22%	1.2
Louisiana	4,657,757	42%	437,791	50%	1.19
Colorado	5,773,714	34%	534,744	39%	1.17
West Virginia	1,793,716	8%	180,119	9%	1.17
Utah	3,271,616	25%	223,270	29%	1.16

Table A4. Racial/Ethnic Disparity Ratio by State *continued*

State	Total Population, 2020	% of Population Who Is Black, Latino, Asian, Native American or Two or More Races	Limited Access Population	% of Limited Access Population Who Is Black, Latino, Asian, Native American or Two or More Races	Racial Disparity Ratio
Maryland	6,177,224	51%	771,796	58%	1.14
Oregon	4,237,256	26%	258,475	30%	1.14
New Mexico	2,117,522	64%	311,094	72%	1.13
Virginia	8,631,393	40%	661,451	44%	1.12
Arizona	7,151,502	46%	888,473	50%	1.09
Missouri	6,154,913	22%	320,412	23%	1.08
Florida	21,538,187	47%	2,009,953	51%	1.07
Nevada	3,104,614	53%	498,284	56%	1.05
Idaho	1,839,106	22%	103,379	24%	1.05
California	39,538,223	64%	2,470,759	67%	1.05
Texas	29,145,505	59%	3,720,058	61%	1.03
Kansas	2,937,880	25%	197,350	25%	1.01
Georgia	10,711,908	49%	955,492	49%	1
New Hampshire	1,377,529	12%	174,765	12%	1
New York	20,201,249	47%	1,048,108	46%	0.98
New Jersey	9,288,994	48%	1,084,926	46%	0.97
Nebraska	1,961,504	23%	111,346	23%	0.97
Oklahoma	3,959,353	35%	332,422	34%	0.97
Tennessee	6,910,840	28%	633,149	27%	0.97
Hawaii	1,455,271	79%	252,353	75%	0.95
Washington	7,705,281	34%	792,009	32%	0.95
North Carolina	10,439,388	38%	733,702	36%	0.94
Iowa	3,190,369	16%	162,950	15%	0.93
South Carolina	5,118,425	37%	412,197	34%	0.92
Alaska	733,391	40%	90,135	37%	0.92
Alabama	5,024,279	36%	317,280	32%	0.87
Mississippi	2,961,279	43%	254,297	37%	0.87
Vermont	643,077	10%	18,623	9%	0.86
Arkansas	3,011,524	28%	193,227	22%	0.76

Table A5. Racial/Ethnic Disparity Ratio by Metro Area

MSA	Total Population, 2020	% of Who Is Black, Latino, Asian, Native American, or Two or More Races	Limited Access Population	% of Limited Access Population Who Is Black, Latino, Asian, Native American, or Two or More Races	Racial Disparity Ratio
Buffalo-Cheektowaga, NY	1,166,902	23%	123,914	42%	1.88
Rochester, NY	1,090,135	24%	156,912	44%	1.86
Albany-Schenectady-Troy, NY	899,262	21%	107,450	37%	1.8
Milwaukee-Waukesha, WI	1,574,731	34%	126,139	60%	1.75
Madison, WI	680,796	18%	31,785	29%	1.63
Dayton-Kettering, OH	814,049	24%	37,607	38%	1.56
New Orleans-Metairie, LA	1,271,845	49%	140,558	75%	1.53
Harrisburg-Carlisle, PA	591,712	23%	44,669	35%	1.49
Des Moines-West Des Moines, IA	709,466	19%	32,310	27%	1.42
Pittsburgh, PA	2,370,930	15%	263,157	21%	1.41
Indianapolis-Carmel-Anderson, IN	2,111,040	28%	234,936	39%	1.4
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,245,051	38%	751,513	52%	1.37
Syracuse, NY	662,057	18%	57,145	25%	1.37
Louisville/Jefferson County, KY-IN	1,285,439	25%	150,919	33%	1.36
Worcester, MA-CT	978,529	23%	108,457	31%	1.35
Baltimore-Columbia-Towson, MD	2,844,510	44%	366,011	58%	1.33
New Haven-Milford, CT	864,835	38%	121,787	49%	1.3
Hartford-East Hartford-Middletown, CT	1,213,531	34%	102,813	43%	1.29
Chicago-Naperville-Elgin, IL-IN-WI	9,618,502	47%	790,284	60%	1.28
North Port-Sarasota-Bradenton, FL	833,716	23%	51,999	28%	1.24
Springfield, MA	699,162	30%	80,449	37%	1.23
Minneapolis-St. Paul-Bloomington, MN-WI	3,690,261	25%	378,706	30%	1.22
Boston-Cambridge-Newton, MA-NH	4,941,632	30%	634,012	36%	1.2
Tampa-St. Petersburg-Clearwater, FL	3,175,275	38%	289,002	45%	1.2
Cleveland-Elyria, OH	2,088,251	30%	131,377	36%	1.19
Columbus, OH	2,138,926	28%	200,022	33%	1.19
Virginia Beach-Norfolk-Newport News, VA-NC	1,799,674	45%	147,807	53%	1.19

Table A5. Racial/Ethnic Disparity Ratio by Metro Area *continued*

MSA	Total Population, 2020	% of Who Is Black, Latino, Asian, Native American, or Two or More Races	Limited Access Population	% of Limited Access Population Who Is Black, Latino, Asian, Native American, or Two or More Races	Racial Disparity Ratio
Richmond, VA	1,314,434	42%	118,922	50%	1.18
Portland-Vancouver-Hillsboro, OR-WA	2,512,859	27%	164,623	32%	1.18
Cincinnati, OH-KY-IN	2,256,884	21%	246,564	24%	1.15
Salt Lake City, UT	1,257,936	28%	40,082	32%	1.15
Baton Rouge, LA	870,569	43%	79,780	49%	1.15
Jacksonville, FL	1,605,848	36%	167,643	41%	1.13
Providence-Warwick, RI-MA	1,676,579	25%	198,844	28%	1.12
Detroit-Warren-Dearborn, MI	4,392,041	34%	390,824	38%	1.12
Washington-Arlington-Alexandria, DC-VA-MD-WV	6,385,162	54%	664,345	61%	1.12
Bridgeport-Stamford-Norwalk, CT	957,419	38%	95,834	43%	1.12
Scranton--Wilkes-Barre, PA	567,559	17%	42,354	19%	1.1
Denver-Aurora-Lakewood, CO	2,963,821	36%	262,927	39%	1.09
Fresno, CA	1,008,654	70%	115,268	76%	1.08
Sacramento-Roseville-Folsom, CA	2,397,382	48%	208,126	51%	1.08
Albuquerque, NM	916,528	62%	144,478	66%	1.08
Orlando-Kissimmee-Sanford, FL	2,673,376	52%	265,240	55%	1.07
San Francisco-Oakland-Berkeley, CA	4,749,008	61%	207,455	65%	1.07
Winston-Salem, NC	675,966	32%	58,866	34%	1.07
Phoenix-Mesa-Chandler, AZ	4,845,832	45%	537,865	48%	1.06
Grand Rapids-Kentwood, MI	1,087,592	22%	87,162	23%	1.06
Greensboro-High Point, NC	776,566	42%	47,694	44%	1.06
Colorado Springs, CO	755,105	30%	114,624	32%	1.05
Stockton, CA	779,233	67%	107,887	70%	1.05
Los Angeles-Long Beach-Anaheim, CA	13,200,998	71%	592,774	74%	1.04
Tulsa, OK	1,015,331	35%	81,487	37%	1.04
Las Vegas-Henderson-Paradise, NV	2,265,461	57%	362,450	59%	1.03
Lakeland-Winter Haven, FL	725,046	41%	99,422	42%	1.03

Table A5. Racial/Ethnic Disparity Ratio by Metro Area *continued*

MSA	Total Population, 2020	% of Who Is Black, Latino, Asian, Native American, or Two or More Races	Limited Access Population	% of Limited Access Population Who Is Black, Latino, Asian, Native American, or Two or More Races	Racial Disparity Ratio
McAllen-Edinburg-Mission, TX	870,781	93%	155,823	96%	1.03
Spokane-Spokane Valley, WA	585,784	15%	28,145	16%	1.03
San Diego-Chula Vista-Carlsbad, CA	3,298,634	56%	200,789	57%	1.03
Provo-Orem, UT	671,185	17%	78,967	17%	1.02
Wichita, KS	647,610	28%	56,923	29%	1.02
Tucson, AZ	1,043,433	49%	179,884	50%	1.02
Poughkeepsie-Newburgh-Middletown, NY	697,221	33%	101,159	33%	1.02
Charleston-North Charleston, SC	799,636	36%	41,251	36%	1.01
Riverside-San Bernardino-Ontario, CA	4,599,839	69%	370,494	70%	1.01
Cape Coral-Fort Myers, FL	760,822	34%	65,238	34%	1
Augusta-Richmond County, GA-SC	611,000	45%	33,964	45%	0.99
Seattle-Tacoma-Bellevue, WA	4,018,762	37%	418,933	37%	0.99
Atlanta-Sandy Springs-Alpharetta, GA	6,089,815	52%	648,961	52%	0.99
Durham-Chapel Hill, NC	649,903	44%	31,825	43%	0.98
Raleigh-Cary, NC	1,413,982	38%	99,329	37%	0.98
San Jose-Sunnyvale-Santa Clara, CA	2,000,468	69%	91,136	67%	0.97
Miami-Fort Lauderdale-Pompano Beach, FL	6,138,333	70%	469,642	68%	0.97
Bakersfield, CA	909,235	66%	109,220	64%	0.97
Urban Honolulu, HI	1,016,508	79%	151,177	76%	0.96
Boise City, ID	764,718	19%	44,367	18%	0.95
Palm Bay-Melbourne-Titusville, FL	606,612	26%	54,805	24%	0.95
El Paso, TX	868,859	85%	105,489	81%	0.94
Omaha-Council Bluffs, NE-IA	967,604	24%	42,618	22%	0.94
Charlotte-Concord-Gastonia, NC-SC	2,660,329	39%	153,935	36%	0.93
Columbia, SC	829,470	44%	101,459	41%	0.93

Table A5. Racial/Ethnic Disparity Ratio by Metro Area *continued*

MSA	Total Population, 2020	% of Who Is Black, Latino, Asian, Native American, or Two or More Races	Limited Access Population	% of Limited Access Population Who Is Black, Latino, Asian, Native American, or Two or More Races	Racial Disparity Ratio
Austin-Round Rock-Georgetown, TX	2,283,371	46%	483,472	43%	0.92
Houston-The Woodlands-Sugar Land, TX	7,122,240	63%	777,296	58%	0.92
Jackson, MS	591,978	55%	59,344	51%	0.92
Allentown-Bethlehem-Easton, PA-NJ	861,889	27%	86,885	25%	0.91
St. Louis, MO-IL	2,820,253	27%	209,410	24%	0.91
Little Rock-North Little Rock-Conway, AR	748,031	33%	68,820	30%	0.91
Dallas-Fort Worth-Arlington, TX	7,637,387	53%	837,848	48%	0.9
San Antonio-New Braunfels, TX	2,558,143	66%	486,509	58%	0.88
Nashville-Davidson--Murfreesboro--Franklin, TN	1,989,519	27%	191,711	24%	0.87
New York-Newark-Jersey City, NY-NJ-PA	20,140,470	52%	1,093,910	46%	0.87
Oxnard-Thousand Oaks-Ventura, CA	843,843	55%	45,098	48%	0.87
Memphis, TN-MS-AR	1,337,779	57%	119,424	49%	0.85
Oklahoma City, OK	1,425,695	36%	136,193	30%	0.85
Akron, OH	702,219	21%	27,748	17%	0.83
Deltona-Daytona Beach-Ormond Beach, FL	668,921	28%	68,070	23%	0.82
Knoxville, TN	879,773	14%	95,351	11%	0.79
Kansas City, MO-KS	2,192,035	27%	106,399	22%	0.79
Ogden-Clearfield, UT	694,863	18%	41,903	14%	0.77
Greenville-Anderson, SC	928,195	27%	91,553	21%	0.75
Toledo, OH	646,604	25%	46,272	15%	0.59
Birmingham-Hoover, AL	1,115,289	37%	73,450	18%	0.49

Income Disparity Ratios

Tables A6 and A7 show the metro areas with the highest Low-Income Disparity Ratios. If the ratio is higher than 1.0 then the Limited-Access population is disproportionately concentrated in low-income communities. Nationally, the Low-Income Disparity Ratio is 1.16 indicating that across the country, Limited-Access Areas are disproportionately low-income.

Table A6. Income Disparity Ratio by State

State	Total Population, 2020	% of Population in Low Income Block Groups	Limited-Access Population	% of Limited-Access Population in Low Income Block Groups	Low-Income Disparity Ratio
District of Columbia	658,465	35%	102,438	69%	2
Maryland	6,094,876	28%	756,641	46%	1.61
Rhode Island	1,076,536	29%	89,713	45%	1.57
Pennsylvania	12,694,522	27%	1,131,690	44%	1.67
Connecticut	3,543,260	30%	352,815	44%	1.49
Illinois	12,609,955	30%	913,986	44%	1.48
Massachusetts	6,837,060	28%	851,956	42%	1.49
Arizona	6,996,840	29%	854,428	39%	1.34
Minnesota	5,663,894	28%	501,851	39%	1.39
Michigan	9,922,810	29%	745,897	39%	1.36
Virginia	8,499,110	32%	632,437	39%	1.22
Louisiana	4,399,155	30%	415,083	38%	1.28
California	38,767,799	31%	2,365,276	38%	1.24
New York	19,533,510	30%	1,017,934	38%	1.28
Delaware	976,366	28%	126,624	38%	1.37
Vermont	638,194	23%	18,623	38%	1.64
Wisconsin	5,847,160	26%	362,055	37%	1.44
Oregon	4,188,961	26%	254,998	37%	1.39
New Mexico	2,052,925	29%	302,885	36%	1.27
Kentucky	4,433,926	31%	383,915	35%	1.13
Ohio	11,611,982	27%	805,882	35%	1.3
Indiana	6,670,378	27%	606,375	35%	1.29
Florida	21,045,986	28%	1,962,390	35%	1.25
Maine	1,351,753	27%	60,310	35%	1.27

Table A6. Income Disparity Ratio by State *continued*

State	Total Population, 2020	% of Population in Low Income Block Groups	Limited-Access Population	% of Limited-Access Population in Low Income Block Groups	Low-Income Disparity Ratio
Nevada	3,057,151	28%	487,973	34%	1.21
New Jersey	9,080,985	30%	1,063,571	33%	1.1
Nebraska	1,942,450	28%	111,346	32%	1.14
Colorado	5,681,511	31%	525,345	31%	1.02
Georgia	10,414,981	31%	933,761	31%	1.01
South Dakota	877,782	27%	64,488	30%	1.1
Texas	28,260,136	31%	3,551,906	28%	0.92
Kansas	2,896,531	29%	193,254	27%	0.93
North Carolina	10,266,287	28%	704,447	27%	0.96
South Carolina	5,008,729	28%	399,258	27%	0.93
Hawaii	1,435,728	23%	250,512	25%	1.07
Utah	3,249,690	25%	221,733	24%	0.95
Washington	7,611,792	26%	785,284	24%	0.91
West Virginia	1,754,484	26%	176,170	23%	0.91
Arkansas	2,959,886	29%	192,737	23%	0.79
Montana	1,074,126	28%	68,005	22%	0.8
Mississippi	2,867,079	30%	248,841	22%	0.73
Oklahoma	3,912,025	29%	327,985	21%	0.71
Tennessee	6,819,388	29%	621,486	20%	0.71
Missouri	6,074,154	28%	318,609	20%	0.72
Idaho	1,800,154	26%	102,231	20%	0.78
North Dakota	766,285	22%	60,283	19%	0.89
Iowa	3,155,132	25%	159,642	18%	0.72
New Hampshire	1,360,039	25%	172,465	17%	0.67
Alaska	725,022	29%	87,405	16%	0.56
Alabama	4,918,243	29%	313,572	13%	0.46
Wyoming	572,852	23%	28,633	9%	0.41
Nation	324,658,045	29%	27,787,144	34%	1.16

Table A7. Income Disparity Ratio by Metropolitan Statistical Areas

MSA	Total Population, 2020	% of Population in Low Income Block Groups	Limited-Access Population	% of Limited-Access Population in Low Income Block Groups	Low-Income Disparity Ratio
Albany-Schenectady-Troy, NY	879,538	24%	106,747	50%	2.03
Baltimore-Columbia-Towson, MD	2,784,445	28%	357,437	56%	1.99
New Orleans-Metairie, LA	1,237,801	30%	138,386	57%	1.94
San Francisco-Oakland-Berkeley, CA	4,642,784	29%	196,135	55%	1.91
Virginia Beach-Norfolk-Newport News, VA-NC	1,773,580	29%	145,297	56%	1.89
Cleveland-Elyria, OH	2,063,849	27%	128,992	51%	1.88
Milwaukee-Waukesha, WI	1,555,448	30%	121,693	57%	1.88
Harrisburg-Carlisle, PA	584,654	25%	43,185	47%	1.86
Madison, WI	673,805	23%	31,785	43%	1.85
Rochester, NY	1,064,630	27%	154,654	49%	1.8
Buffalo-Cheektowaga, NY	1,133,351	27%	117,181	46%	1.73
McAllen-Edinburg-Mission, TX	787,828	30%	128,813	52%	1.72
Miami-Fort Lauderdale-Pompano Beach, FL	5,951,395	30%	454,872	51%	1.71
Dayton-Kettering, OH	803,451	29%	36,921	49%	1.7
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,054,059	30%	724,466	50%	1.7
Chicago-Naperville-Elgin, IL-IN-WI	9,463,155	30%	762,282	49%	1.62
Richmond, VA	1,295,089	30%	108,967	47%	1.61
Salt Lake City, UT	1,242,803	25%	38,545	41%	1.6
New Haven-Milford, CT	850,349	33%	119,771	52%	1.58
Pittsburgh, PA	2,336,567	26%	261,667	40%	1.56
Hartford-East Hartford-Middletown, CT	1,190,027	27%	98,224	42%	1.53
Los Angeles-Long Beach-Anaheim, CA	12,969,718	33%	585,918	50%	1.53
Worcester, MA-CT	961,121	27%	108,457	40%	1.5
Providence-Warwick, RI-MA	1,644,798	29%	194,891	43%	1.49
Portland-Vancouver-Hillsboro, OR-WA	2,488,857	27%	162,175	39%	1.46
Des Moines-West Des Moines, IA	699,494	28%	30,970	41%	1.46
Boston-Cambridge-Newton, MA-NH	4,809,761	28%	609,246	41%	1.46
North Port-Sarasota-Bradenton, FL	817,344	26%	51,999	37%	1.45

Table A7. Income Disparity Ratio by Metropolitan Statistical Areas *continued*

MSA	Total Population, 2020	% of Population in Low Income Block Groups	Limited-Access Population	% of Limited-Access Population in Low Income Block Groups	Low-Income Disparity Ratio
San Jose-Sunnyvale-Santa Clara, CA	1,982,862	32%	87,084	45%	1.44
Indianapolis-Carmel-Anderson, IN	2,070,230	28%	231,945	41%	1.43
Detroit-Warren-Dearborn, MI	4,336,709	31%	386,300	44%	1.43
Allentown-Bethlehem-Easton, PA-NJ	856,413	30%	86,885	43%	1.42
Las Vegas-Henderson-Paradise, NV	2,234,691	27%	354,732	39%	1.42
Minneapolis-St. Paul-Bloomington, MN-WI	3,658,208	28%	377,570	39%	1.42
Phoenix-Mesa-Chandler, AZ	4,748,218	29%	510,593	40%	1.41
Syracuse, NY	649,856	27%	55,881	38%	1.39
Louisville/Jefferson County, KY-IN	1,265,685	26%	145,375	36%	1.37
Tampa-St. Petersburg-Clearwater, FL	3,121,755	28%	284,382	37%	1.35
Fresno, CA	994,032	35%	112,481	47%	1.34
Jacksonville, FL	1,581,208	28%	165,314	37%	1.34
Omaha-Council Bluffs, NE-IA	960,063	29%	42,618	39%	1.33
Bridgeport-Stamford-Norwalk, CT	940,258	33%	94,831	44%	1.33
Charleston-North Charleston, SC	789,908	27%	41,251	36%	1.32
Columbus, OH	2,093,595	29%	191,184	38%	1.32
Baton Rouge, LA	815,819	29%	71,745	38%	1.32
Washington-Arlington-Alexandria, DC-VA-MD-WV	6,325,098	29%	654,562	37%	1.27
Grand Rapids-Kentwood, MI	1,073,751	26%	85,194	33%	1.25
Greensboro-High Point, NC	769,406	29%	47,694	36%	1.24
Springfield, MA	669,292	28%	64,699	34%	1.22
Poughkeepsie-Newburgh-Middletown, NY	675,478	24%	98,093	29%	1.19
El Paso, TX	838,290	29%	99,282	35%	1.19
Sacramento-Roseville-Folsom, CA	2,365,366	29%	206,908	35%	1.18
Wichita, KS	640,000	31%	55,726	35%	1.16
Memphis, TN-MS-AR	1,312,569	32%	119,424	37%	1.16
Cincinnati, OH-KY-IN	2,218,875	28%	242,144	31%	1.13
Albuquerque, NM	900,438	28%	143,247	32%	1.12

Table A7. Income Disparity Ratio by Metropolitan Statistical Areas *continued*

MSA	Total Population, 2020	% of Population in Low Income Block Groups	Limited-Access Population	% of Limited-Access Population in Low Income Block Groups	Low-Income Disparity Ratio
Seattle-Tacoma-Bellevue, WA	3,969,389	27%	413,652	30%	1.12
Denver-Aurora-Lakewood, CO	2,930,710	30%	260,345	33%	1.11
Orlando-Kissimmee-Sanford, FL	2,611,953	29%	261,007	32%	1.1
Atlanta-Sandy Springs-Alpharetta, GA	5,920,970	29%	630,903	32%	1.09
Columbia, SC	803,840	27%	96,964	30%	1.09
Tucson, AZ	1,021,527	32%	173,111	35%	1.09
Cape Coral-Fort Myers, FL	746,701	23%	64,163	25%	1.09
Scranton--Wilkes-Barre, PA	556,532	27%	38,259	29%	1.09
Lakeland-Winter Haven, FL	713,000	25%	95,509	27%	1.09
Oxnard-Thousand Oaks-Ventura, CA	836,643	28%	45,098	30%	1.08
Charlotte-Concord-Gastonia, NC-SC	2,620,007	30%	145,536	32%	1.06
Greenville-Anderson, SC	917,779	26%	91,553	28%	1.06
Little Rock-North Little Rock-Conway, AR	741,875	27%	68,820	28%	1.04
Winston-Salem, NC	670,403	24%	58,866	25%	1.03
Augusta-Richmond County, GA-SC	597,430	30%	32,471	30%	0.99
Raleigh-Cary, NC	1,386,428	28%	98,510	28%	0.99
Riverside-San Bernardino-Ontario, CA	4,503,574	30%	354,752	30%	0.99
St. Louis, MO-IL	2,791,301	26%	207,625	25%	0.98
Ogden-Clearfield, UT	694,021	23%	41,903	23%	0.97
Urban Honolulu, HI	999,260	24%	149,336	23%	0.96
Stockton, CA	761,572	33%	105,077	32%	0.95
Houston-The Woodlands-Sugar Land, TX	6,878,629	31%	740,257	30%	0.95
Dallas-Fort Worth-Arlington, TX	7,554,117	31%	822,766	29%	0.94
Palm Bay-Melbourne-Titusville, FL	596,151	23%	51,318	22%	0.93
San Diego-Chula Vista-Carlsbad, CA	3,243,314	30%	189,543	28%	0.92
Spokane-Spokane Valley, WA	578,390	25%	28,145	23%	0.92
New York-Newark-Jersey City, NY-NJ-PA	19,498,821	32%	1,072,036	29%	0.92
Akron, OH	692,949	28%	26,405	26%	0.92

Table A7. Income Disparity Ratio by Metropolitan Statistical Areas *continued*

MSA	Total Population, 2020	% of Population in Low Income Block Groups	Limited-Access Population	% of Limited-Access Population in Low Income Block Groups	Low-Income Disparity Ratio
Knoxville, TN	872,137	28%	95,351	26%	0.91
Durham-Chapel Hill, NC	635,468	31%	29,793	27%	0.86
San Antonio-New Braunfels, TX	2,519,611	28%	478,359	23%	0.82
Jackson, MS	583,384	31%	55,500	25%	0.81
Tulsa, OK	1,014,703	29%	81,487	23%	0.8
Deltona-Daytona Beach-Ormond Beach, FL	663,217	23%	68,070	18%	0.79
Bakersfield, CA	872,074	34%	93,750	26%	0.76
Colorado Springs, CO	746,471	29%	111,764	22%	0.76
Austin-Round Rock-Georgetown, TX	2,213,149	28%	471,269	20%	0.71
Boise City, ID	746,392	26%	43,219	18%	0.7
Oklahoma City, OK	1,391,785	29%	133,892	20%	0.67
Kansas City, MO-KS	2,164,748	28%	103,993	18%	0.62
Toledo, OH	633,216	27%	46,272	16%	0.57
Provo-Orem, UT	665,921	24%	78,967	13%	0.54
Nashville-Davidson--Murfreesboro--Franklin, TN	1,962,874	28%	186,907	12%	0.42
Birmingham-Hoover, AL	1,090,914	28%	73,450	11%	0.39



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Use Cases: Data Informed Investments in Philadelphia and Georgia

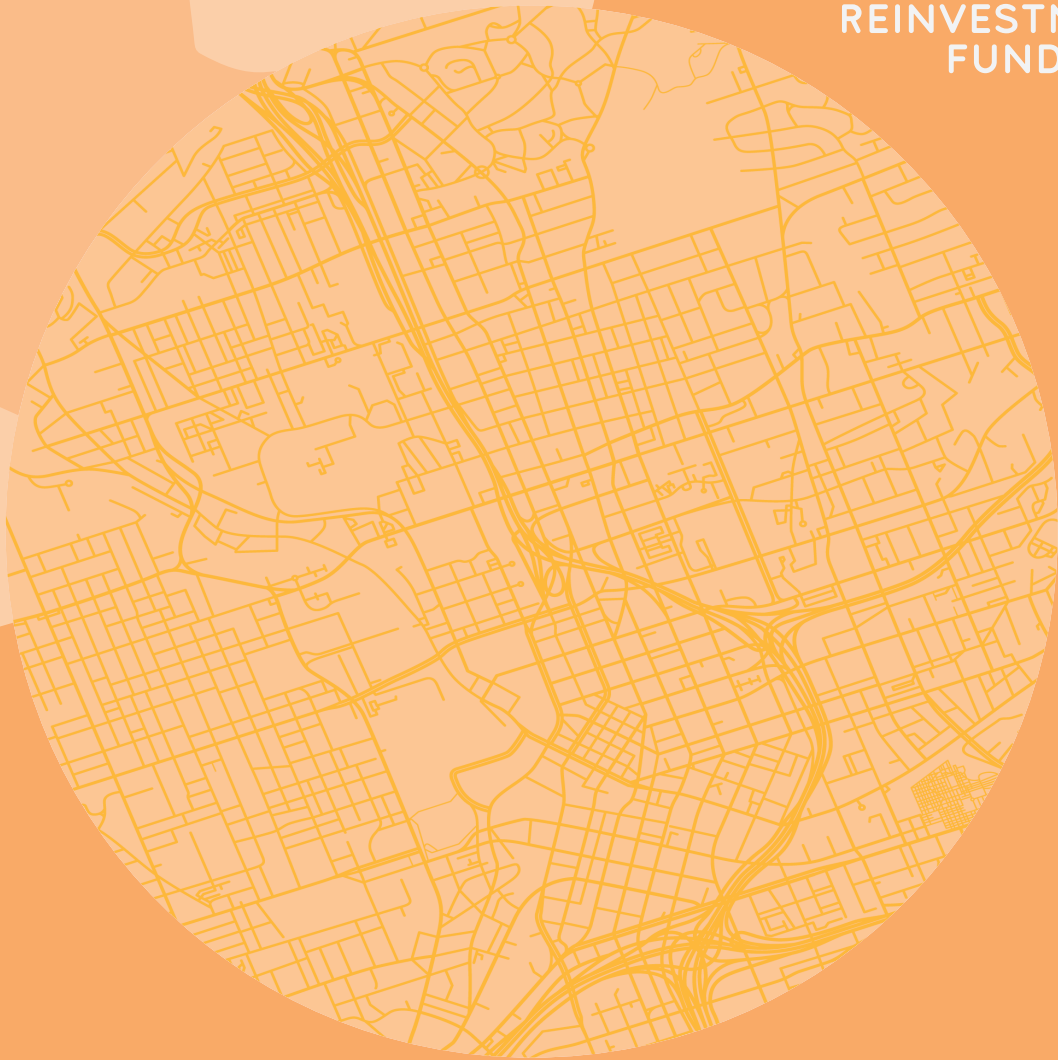


Data Informed Investments in Philadelphia & Georgia

Reinvestment Fund uses the Limited Supermarket Access (LSA) analysis along with other metrics to inform the strategic deployment of capital to expand and enhance access to healthy food in areas that need it most. The LSA analysis is a nuanced analytic that helps Reinvestment Fund identify opportunities to bolster local food systems through a combination of traditional full-service supermarkets, and smaller format interventions that fill gaps in residents' ability to access fresh food in their communities. The following investment profiles from West Philadelphia and Georgia demonstrate how Reinvestment Fund contextualizes its investments and serve as examples of how communities across the country can use the LSA analysis along with other neighborhood metrics to describe local conditions to external audiences.



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Data Informed Investments in Philadelphia

Data Informed Investments in West Philadelphia

Between 2015 and 2021

Reinvestment Fund financed seven healthy food retail projects in West Philadelphia including:

- 1. Brown's Parkside Shoprite** is a full-service grocery store that originally opened with financing from Reinvestment Fund in 2008. When the store initially opened the neighborhood had no large format, full-service grocery stores. In 2018, Reinvestment Fund provided additional financing for store renovations and improvements.
- 2. Honeysuckle Provisions** is a small format store that supports the local economy using food as an anchor for the community. It includes a small sustainable grocery, meat market, café/restaurant, and supper club. In 2020, Honeysuckle Provisions received funding through Reinvestment Fund's Philadelphia Food Justice Initiative (PFJI) – a joint project with the city of Philadelphia's Department of Health.

3. https://www.inquirer.com/philly/hp/news_update/20080605_Neighbors_rejoice_as_new_shopping_center_opens_in_West_Philadelphia.html

4. <https://www.inquirer.com/food/restaurants/honeysuckle-provisions-omar-tate-cybill-20221101.html>

Glossary

Supermarket The LSA analysis measures access to healthy food by identifying areas that are well-served by supermarkets and those that have relatively limited and inequitable access to supermarkets. In this report, Reinvestment Fund uses supermarkets (grocery stores with at least \$2 million in annual sales) as a proxy for healthy food access because a review of the relevant research shows that supermarkets, compared to smaller stores (e.g., corner stores), most consistently offer the greatest variety of healthy foods at the lowest prices.

Low-Access Score is the percentage by which a block group's distance to the nearest supermarket would need to be reduced to equal the typical distance for well-served block groups in that class (well-served block groups have median incomes that are at least 120% of the state or metro median). Block groups with Low-Access Scores greater than or equal to 45 are considered Limited-Access. In Limited-Access block groups, residents must travel almost twice as far to a supermarket as residents in well-served block groups with similar population density and car ownership.

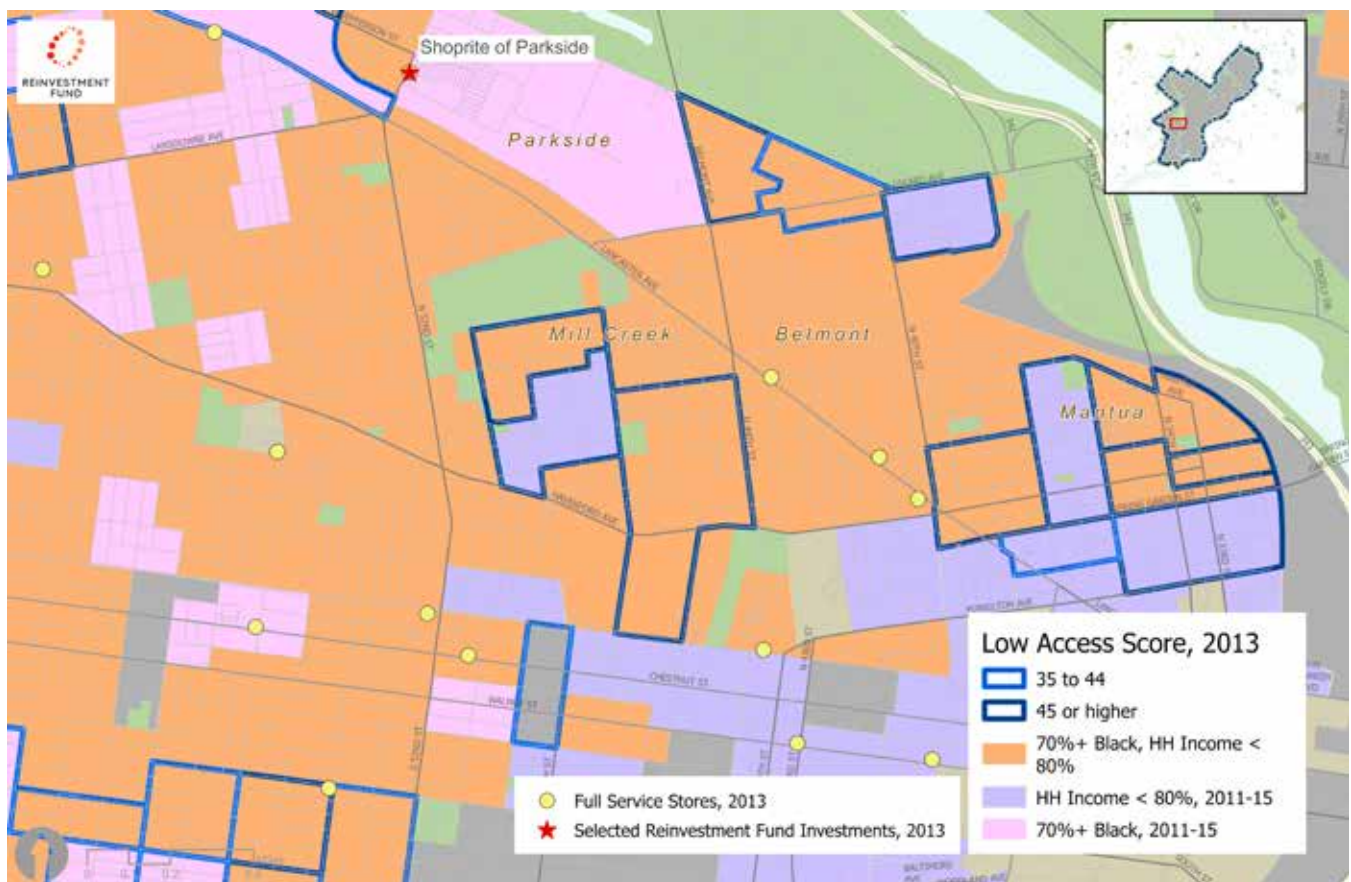
Limited-Access Areas are single block groups, or collections of block groups, where residents must travel almost twice as far to a full-service supermarket as a resident in a block group with similar population density and a median household income that is at least 120% of the **state or metro median**.

3. Mill Creek Farm is a Black-run urban farm in West Philadelphia that grows food, supports farmers' markets, and donates hundreds of pounds of produce to pop-up food distribution sites around West Philadelphia. In 2019, Mill Creek Farm also received financing through Reinvestment Fund's PFJI.

The Parkside, Belmont and Mantua neighborhoods of West Philadelphia are home to roughly 48,755 residents and virtually all block groups are very densely populated. Nearly 66% of West Philadelphia residents are Black, well above the city-wide Black population percentage (42%). In 2021, 46% of households had an annual income of less than \$25,000.

Map 1 presents a snapshot of West Philadelphia in 2013, highlighting block groups with predominantly Black populations, low-incomes relative to the median household income of the Philadelphia metropolitan area, or both characteristics. The yellow circles represent full-service grocery stores that were open in 2013, and the red star shows the location of the Shoprite on Parkside, initially financed in 2008 and again funded in 2018.

Map 1. Food Retail Location, Limited-Access Areas by Race and Income in West Philadelphia - 2013

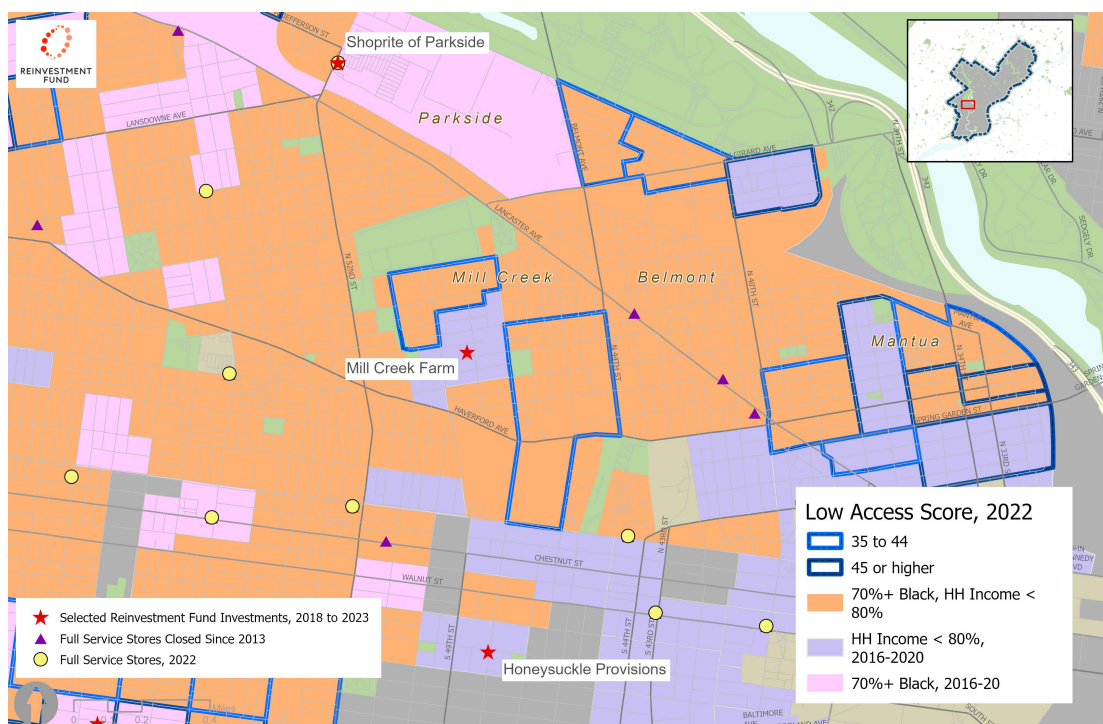


Map 1 also shows how access to full-service grocery stores varies across the neighborhood. Block groups outlined in blue have elevated Low-Access Scores. These areas are underserved relative to similarly dense neighborhoods and residents must travel more than three-quarters of a mile to get to a full-service grocer.

Dark blue outlines show block groups with a Low-Access Score of 45 or higher – block groups defined as Limited-Access. Light blue outlines are block groups with elevated Low-Access Scores between 35 and 44. These block groups are underserved by food retail but are below the threshold to be considered a Limited-Access area. Low-Access Scores in this range (35-44) can be interpreted as places that are not well-served by supermarkets, but where access to grocery stores is not as dire as block groups with a Low-Access Score of above 45.

Map 2 presents a snapshot of West Philadelphia in 2022, again showing block groups that are predominantly Black, predominantly low-income, or both. The yellow circles represent full-service grocery stores that were open in 2022, red stars represent selected Reinvestment Fund financed stores between 2018 and 2023, including an additional investment in Shoprite of Parkside. The purple triangles represent stores that closed between 2013 and 2022.

Map 2. Food Retail Location, Limited-Access Areas by Race and Income in West Philadelphia - 2022





Reinvestment Fund's investments in a variety of food retail choices highlight the broad range of options available to support neighborhood food access. Additional funding for renovations at the Shoprite in Parkside maintains neighborhood access to a traditional, large format supermarket. Financing for Mill Creek Farm supports a Black-run urban farm that provides community access to fresh foods through seasonal farm stands. Honeysuckle Provisions provides a small format grocery store in a location just blocks away from three shuttered markets. Importantly, neither Mill Creek Farm, nor Honeysuckle Provisions are large enough stores to be included in the LSA analysis. Their presence has 'no effect' on whether a nearby block group would be considered Limited-Access within the LSA analysis. And yet, they occupy critical positions that fill gaps between traditional full-service supermarkets within the broader network of the West Philadelphia food ecosystem and highlight the importance of local, multi-faceted analysis.

Using the LSA analysis alongside demographic and non-traditional food retail data helps provide a fuller picture of neighborhood food insecurity. Burdensome distances are one barrier to accessing healthy food, but there are others. Low incomes are often an impediment for residents to access healthy food. Locating full-service grocery stores closer to low-income households can be an important intervention and can support the local economy. Organizations like Mill Creek Farm address barriers to access that go beyond proximity by supporting neighborhood food drives, particularly important during the height of the COVID-19 pandemic. Investments made through the PFJI are intended to empower communities to exercise their right to grow, sell, and eat healthy foods. Both Honeysuckle and Mill Creek are Black-owned community-based organizations that reflect the predominately Black neighborhoods they serve, increasing access to healthy food retail and furthering PFJI's food justice objectives. PFJI strengthens these assets by providing funding for innovative, community-led projects that work to further food justice.



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Data Informed Investments in Georgia

Data Informed Investments in Georgia

Between 2018 and 2022 Reinvestment Fund financed four healthy food retail projects in Georgia. Among them:

1. Clinch Memorial Hospital is a critical access hospital serving southeast rural Georgia. In 2021, the Healthy Food Financing Initiative (HFFI) supported the launch of a mobile market selling food to nearby Limited-Access Areas.
2. Food for Less is a low-cost grocery store in Albany that replaced a grocery store that closed in 2018. With the only full-service grocery closed, travel distances to the next nearest store were far enough to make the area Limited-Access. In 2020, HFFI funds supported the development of the new full-service grocery store with a business model built on selling fresh food at affordable prices.

Glossary

Supermarket The LSA analysis measures access to healthy food by identifying areas that are well-served by supermarkets and those that have relatively limited and inequitable access to supermarkets. In this report, Reinvestment Fund uses supermarkets (grocery stores with at least \$2 million in annual sales) as a proxy for healthy food access because a review of the relevant research shows that supermarkets, compared to smaller stores (e.g., corner stores), most consistently offer the greatest variety of healthy foods at the lowest prices.

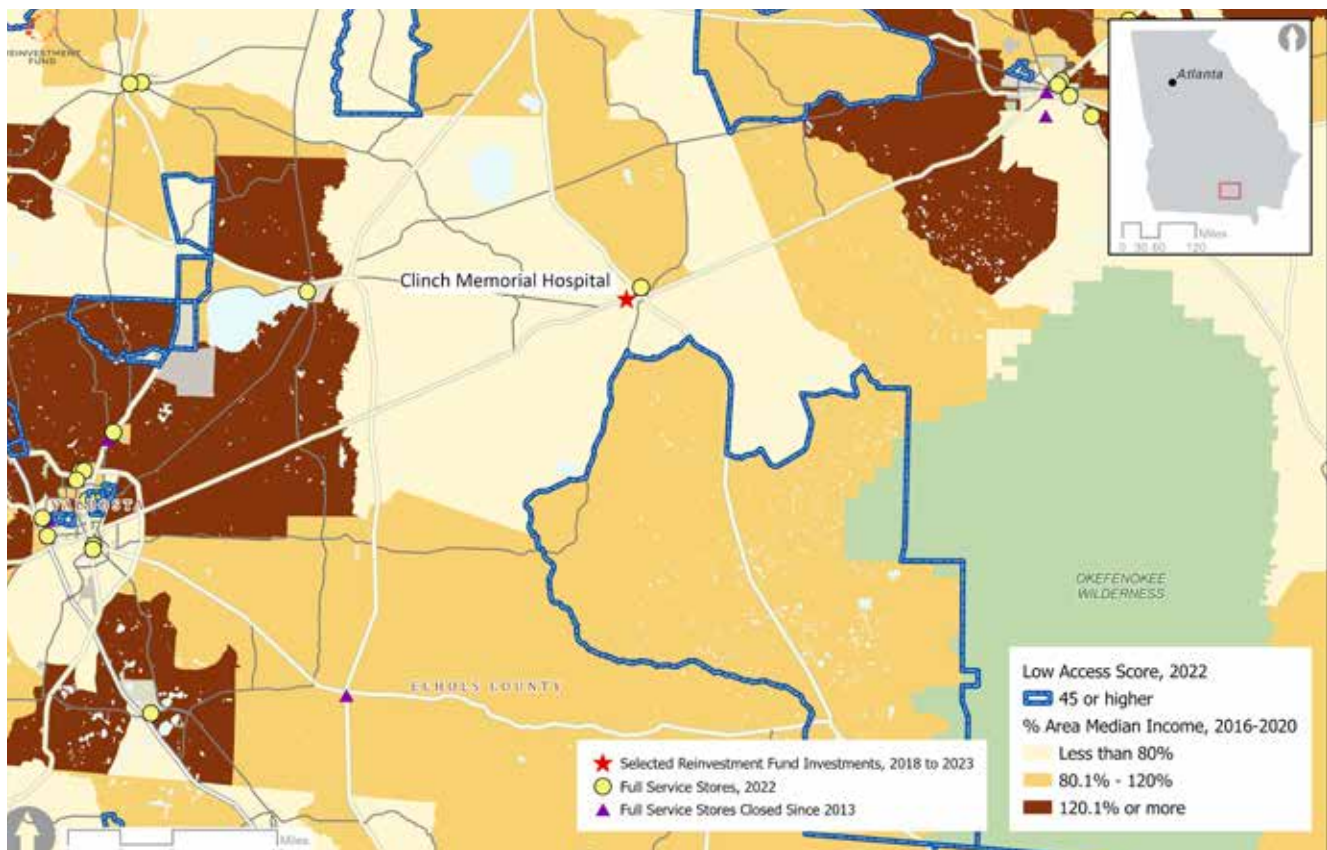
Low-Access Score is the percentage by which a block group's distance to the nearest supermarket would need to be reduced to equal the typical distance for well-served block groups in that class (well-served block groups have median incomes that are at least 120% of the state or metro median). Block groups with Low-Access Scores greater than or equal to 45 are considered Limited-Access. In Limited-Access block groups, residents must travel almost twice as far to a supermarket as residents in well-served block groups with similar population density and car ownership.

Limited-Access Areas are single block groups, or collections of block groups, where residents must travel almost twice as far to a full-service supermarket as a resident in a block group with similar population density and a median household income that is at least 120% of the **state or metro median**.

The Clinch Memorial Hospital is in Homerville, GA, a small town surrounded by rural and remote block groups. Map 3 shows there is just one full-service grocery store in town and no other nearby food retail. The hospital's mobile market will serve rural residents in the surrounding counties, including the Limited-Access Area outlined in dark blue south of the hospital. Support from the mobile market is an important piece of an equitable food retail landscape. Most residents in this Limited-Access Area must travel around 23 miles to get to a full-service store; the healthy food options at the new market help reduce that burden.

Reinvestment Fund's national analysis shows that Limited-Access Areas are disproportionately located in middle-income places in rural areas. Map 3 shows that is also the case in Homerville where the median incomes for residents in both Limited-Access Areas to the north and south of Homerville are between 80% and 120% of the state's median household income, between \$48,000 and \$72,000.

Map 3. Food Retail Location, Limited-Access Areas by Income in Homerville, GA – 2022

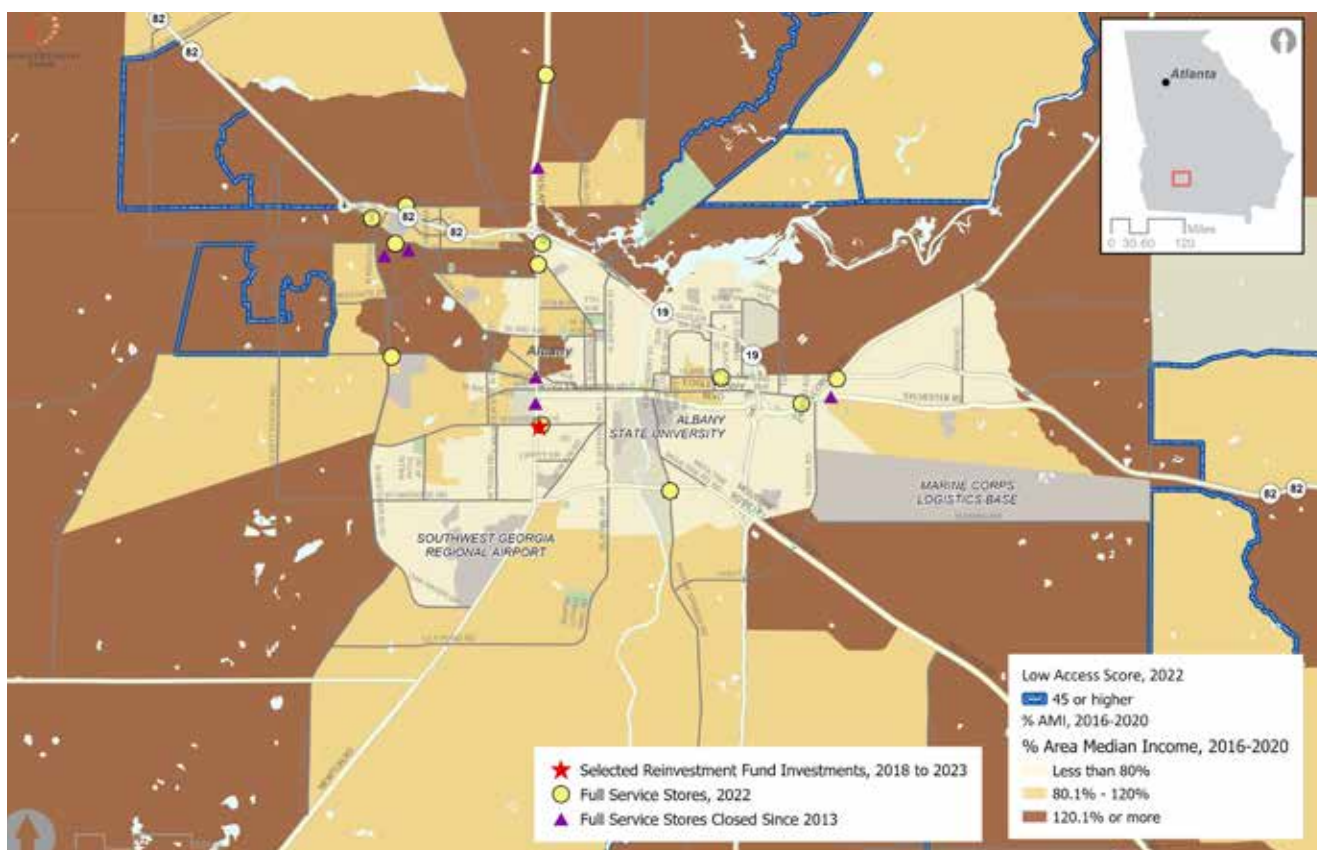


5. https://www.yahoo.com/now/food-less-oasis-eradicates-southeast-230500657.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2x1LnNvbS8&guce_referrer_sig=AQAAACyl_Sdd23Z9JNV6e0IIBXpwjxfaiC61sUTAiavo0epe5q95wSADZOWENkztusf8oqNWwQKljNAUQ25A-PaBuTKM2ecSV

Proximity is one component of food access; another is the ability to afford groceries. Food for Less in Albany, GA is a full-service grocery store under the Piggly Wiggly banner with a business model that offers discounted fresh food. Map 4 shows the area surrounding Food for Less has a median household income of less than 80% of the state median, about \$48,000. HFFI's investment in Food for Less helps create greater food access for its community in two ways: 1) by locating in a previously Limited-Access Area; and 2) by committing to low prices.

The store opened in January 2022 with substantial support from the City of Albany, replacing a full-service store that had closed in 2018.⁵ In addition to the store replaced by Food for Less, Map 4 shows several local store closures reduced the number of food retail options available for residents. Without Food for Less, residents of this block group would be living in a Limited-Access Area, i.e., they would have to travel nearly twice as far as residents in a similarly dense block group to their nearest grocery store.

Map 4. Food Retail Location, Limited-Access Areas by Income in Albany, GA – 2022



Reinvestment Fund guides and contextualizes its investments with analytics like the Limited Supermarket Access analysis in tandem with neighborhood metrics like household income. Understanding the economic and food retail landscape of a place helps tell the story about the ways that projects like the Clinch Memorial Hospital's Mobile Market and Food for Less matter for residents in their communities. These projects also demonstrate the need for both traditional, brick and mortar retail and innovative solutions to address food access across the country where demand for a larger store might be limited due to a dispersed population, limited spending power, or both.



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About Reinvestment Fund

Reinvestment Fund is a national mission-driven financial institution that creates opportunity for underserved people and places through partnerships. We marshal the capital, analytics, and expertise necessary to build strong, healthy, and more equitable communities. Learn more at **www.reinvestment.com**.