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Rural Food Access Investment Area Analysis Report

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Introduction

Across the country, 17.3 million rural U.S. residents lack equitable access to supermarkets. Reinvestment Fund's new Rural Food Access Investment Area (RFAIA) analysis, uses 2012-2106 Census data to determine 11.3 million underserved rural residents live in areas that could support new or expanded food retail options. Despite the need for improved access to fresh and healthy foods in rural areas, many analyses of food access—and many investments to improve food access—have focused on urban areas. To more directly address these needs, and to support Reinvestment Fund's role as National Fund Manager for the U.S. Department of Agriculture's Healthy Food Financing Initiative, Reinvestment Fund developed the Rural Food Access Investment Area analysis as a supplement to our longitudinal analysis of equitable and adequate access to food retail across the U.S.

Since 2010, Reinvestment Fund's Limited Supermarket Access (LSA) analysis has evaluated access to fresh and healthy food retail establishments across the contiguous 48 United States and the District of Columbia to identify areas with both need and market support for investments to improve food access. [1] Recognizing the diverse development patterns that exist across the country, the LSA analysis evaluates food access differently in different kinds of places: equitable access means one thing in dense cities, another thing in suburbs, and another thing still in small cities, towns, and other rural areas. Our approach to this variation makes the results of the LSA analysis useful for different kinds of areas across the country.

However, the LSA analysis is built to identify areas for investment in supermarkets, not smaller-format grocery retailers (e.g., corner grocers). Moreover, the LSA analysis identifies areas for investment in new stores, not currently operating stores. Reinvestment Fund and its partners recognized that many communities lacking equitable access to fresh and healthy foods do not have market support for new full-service supermarkets. This is particularly true in rural communities, where relatively small population centers often make investment in currently operating retailers, as well as in new farmstands, farmers markets, mobile markets, country stores and other small-scale operators, a more appropriate and sustainable intervention.

The RFAIA analysis identified 1,472 Investment Areas containing 11.3 million rural U.S. residents living in households underserved by supermarkets and that likely have market support for investments in new and existing place-based food retail. That is, they live in what we term: Investment Areas. This report: 1) explains the methodology behind the analysis so users of its results can understand how they were generated, what the results mean, and the limitations; 2) summarizes the findings of the RFAIA for the nation and for each of the nine U.S. Census Bureau divisions; and 3) offers guidance for practitioners and advocates to use the results of the analysis to guide investment to rural areas.

Using the RFAIA and other tools, Reinvestment Fund and its partners will continue to work to improve the state of food access in rural communities across the country. The full results, including the location and other information about individual Investment Areas, are available to the public at no cost on PolicyMap, www.PolicyMap.com.

[1] Reinvestment Fund's 2018 Limited Supermarket Access (LSA) analysis.

Measuring Food Access in Rural Areas

Understanding how the RFAIA analysis is generated is important to understanding the results—both for what they say and, just as critically, for what the results do *not* say. This section explains the process so practitioners, advocates, and others will be able to accurately interpret the results of the analysis for their communities of interest and target interventions to improve food access in those areas.

This section describes how, and why, the RFAIA analysis differs from the LSA analysis by making the following adjustments: 1) altering the threshold for defining 'underserved areas'; 2) adjusting the population threshold for inclusion as an 'Investment Area'; and 3) using population density to adjust the size of Investment Areas. Key steps in the rural methodology include:

1. Defining Rural Census Block Groups
2. Identifying Underserved Block Groups
3. Clustering Underserved Areas
4. Reducing Clusters to Meet Population Thresholds
5. Reducing Clusters to Meet Population Density Thresholds

Defining Rural Block Groups

The unit of analysis for the RFAIA analysis is the 2010 U.S. Census Bureau block group. Block groups with at least half of their area in one or more U.S. Census designated places with an estimated population of more than 50,000 people and/or in one or more Census urbanized areas of such places are classified as "urban". These block groups are not included in the analysis. All other block groups, including those in small cities and towns with no more than 50,000 residents, are considered "rural".

Identifying Underserved Rural Block Groups

The RFAIA analysis uses Limited Access Scores to identify block groups that are underserved by supermarkets. Limited Access Scores represent the extent to which the driving distance between a block group and the nearest full-service supermarket that would have to be reduced to meet a 'well-served' benchmark distance for that block group.[2]

In the LSA analysis, communities with Limited Access Scores at or above 0.45 are designated as having limited access to supermarkets and are eligible to be identified as LSA Areas, while communities with Limited Access Scores below 0.45 are considered well-served. The RFAIA analysis uses the 2018 Limited Access Score (based on 2016 supermarket data) and lowers the threshold to 0.35 to permit opportunities to identify areas where investments can create new, or preserve existing, food retail options. Block groups with Limited Access Scores of 0.35 or greater are considered underserved and eligible for inclusion in Investment Areas. Block groups with Limited Access Scores below 0.35 are considered relatively well-served; these block groups are ineligible for inclusion in Investment Areas.[3]

[2] To reflect the fact that "equitable access" means different things in different places, block groups in the LSA analysis are assigned to one of seven Population Density and Car Ownership Classes, and Limited Access Scores are calculated relative to the distance to the nearest supermarket that is typical for not-low-income block groups of each Class. See Reinvestment Fund's 2018 Limited Supermarket Access (LSA) analysis for a more detailed description of the LSA analysis: https://www.reinvestment.com/research-publications/2018-update-analysis-of-limited-supermarket-access/

[3] For display purposes, Limited Access Scores on PolicyMap are presented as integers (for example, 35 instead of 0.35) and "bottom-coded" at 0. As a result, there are no negative Limited Access Scores on PolicyMap.

Clustering Underserved Rural Block Groups

If underserved block groups are next to each other, they are assigned to a single "cluster." Geographically isolated underserved block groups are assigned to their own cluster. Block groups that are next to each other on a map but separated from each other by water are not considered adjacent—unless it is possible to get from one block group to the other using a bridge or a tunnel within the block groups.

Reducing Clusters to Meet Population Thresholds

Reinvestment Fund's experience suggests that at least 2,000 people are needed to achieve sustainable economic support for most place-based interventions to improve food access. Using this threshold, clusters of underserved block groups with fewer than 2,000 residents in households are *not eligible* to be Investment Areas.[4]

Reducing Clusters to Meet Population Density Thresholds

Many initial clusters with at least 2,000 residents in households are quite large and too sparsely populated to provide guidance for the location of investments. Roughly 200 initial clusters with at least 2,000 residents had an area of 500 square miles or more. Additionally, many of these large clusters had low average population densities of fewer than 10 people per square mile. Experience suggests that place-based investments to improve food access are more likely to succeed—and more likely to benefit greater numbers of people—if they are in or near the relatively denser cores of even remote areas. Therefore, population density was used to reduce the size of the largest, least dense clusters to identify those core areas.

Population densities vary substantially across the country. Given the tremendous variation across different Census Divisions, a population density adjustment procedure was implemented separately for each Census Division. Within each Census Division, block groups within the initial clusters that met the population threshold were assigned to density percentiles, i.e. 1st percentile (least dense) to 99th percentile (most dense).

Within each Census Division the threshold for inclusion in an Investment Area was that the block group was at least as dense as the 25th density percentile for all of the Division's initial rural block group clusters. Large, sparsely populated clusters were reduced block group by block group until new, smaller clusters remained with population densities that were more representative of the initial clusters in their Division and still had a population of at least 2,000 people.

To ensure that all final Investment Areas met the population and population density thresholds, these two reduction steps were repeated until all clusters met both criteria. Table 1 presents the threshold population densities for each Census Division.

[4] Because the population data used in the analysis are estimates with some margin of error, initial clusters must have Census population estimates that are *statistically significantly* at or above 2,000 residents in households to become final Investment Areas. This means that users of the RFAIA can be 90 percent confident that the block groups that make up a final Investment Area have a combined population of at least 2,000 residents in households. Additionally, the analysis only looks at residents in households because residents in group quarters like college/university housing, hospitals, skilled nursing facilities, residential treatment centers, correctional facilities, etc. often have access to sources of fresh and healthy foods not available to the general public.

Table 1. Minimum Population Density Thresholds, by Division

Division	Minimum Population Density Threshold (pop./sq. mi.)
East North Central	64.7
East South Central	46.7
Middle Atlantic	104.5
Mountain	29.9
New England	97.5
Pacific	101.8
South Atlantic	81.1
West North Central	17.4
West South Central	35.9

Ultimately, this process identified 1,472 Investment Areas with at least 2,000 residents in households and population density greater than or equal to their Census Division's minimum threshold.

National Results

As previously noted, this RFAIA analysis is not designed to estimate the universe of residents in rural areas that is underserved. It is designed to estimate the universe of residents in rural areas that is underserved who reside in areas where a place-based investment in the retail food sector would be both impactful and, more likely, sustainable. Therefore, the results that follow should not be interpreted as generalizable to all rural residents across the United States.

Across the contiguous 48 United States, 110 million people live in rural areas. Of this total rural population, 17.3 million rural residents, or 15.8 percent of all people living in rural areas, are underserved by supermarkets. To be clear, these are not necessarily people whose food access issues are addressable through a retail place-based investment. In many states, the share of underserved residents in rural areas is even greater: more than one-fifth of rural residents in Maryland, Nevada, New Jersey, New Mexico, North Dakota, South Dakota, Texas, and Washington are underserved in their access to fresh and healthy foods. In Arizona, more than one third of rural residents, or about 500,000 people, are undeserved.

In the small cities, towns, and other rural communities where these people live, the RFAIA analysis identifies 1,472 Investment Areas with both need and market support for place-based interventions to improve food access. Every state, no matter how big or small, how rural or urban, has at least three such areas. California, Florida, Georgia, Michigan, New York, North Carolina, Ohio, and Tennessee each have more than 50 Investment Areas; Pennsylvania and Texas have the most, 69 and 114 respectively.

Combined, these Investment Areas are home to about roughly 11.3 million people, nearly 10 percent of all rural residents in the country. Stated differently, 11.3 million residents of rural areas live in areas that are both underserved and have a sufficiency of residents living in a modestly dense settlement pattern for their region that a place-based food investment could be supported. While the most populous Investment Area (located in southern Arizona) is home to more than 158,000 people, many Investment Areas have only about 2,000 people living in them (the minimum population sufficient to be identified as an Investment Area). Most Investment Areas are home to between about 3,500 and 8,500 people.

Investment Areas range in size from the functional equivalent of neighborhoods in small cities and towns to large portions of very rural states. The smallest Investment Area is 0.1 square miles; it is located in Ithaca, New York (population 30,625). At almost 16,000 square miles, the largest and most populous Investment Area covers a large part of the southern fifth of Arizona. The typical (median) Investment Area is 35.1 square miles—about the size of Vicksburg, Mississippi. Table 2 presents summary results for all forty-eight contiguous states; the total population; total rural population; total rural population who are underserved by supermarkets; total rural population who live in Investment Areas; the percentage of the total rural population who live in Investment Areas; and the total number of Investment Areas. All data are from 2012-2016 5-year American Community Survey estimates.

Table 2. Populations Living in Investment Areas, by State, 2012-2016

	State	Total Population	Total Rural Population	Total Underserved Rural Population	Total Population In Investment Areas	Percent of Rural Pop in Investment Areas	Number of Investment Areas
New England	Connecticut	3,471,703	823,890	136,919	105,734	12.8%	17
	Maine	1,294,118	1,114,670	163,496	53,729	4.8%	11
	Massachusetts	6,491,551	1,265,020	227,896	167,767	13.3%	21
	New Hampshire	1,285,615	866,198	152,894	115,454	13.3%	16
	Rhode Island	1,012,343	148,964	26,832	16,892	11.3%	3
	Vermont	600,847	600,847	68,175	19,517	3.2%	6
Mid-Atlantic	New Jersey	8,728,101	1,259,250	293,416	253,438	20.1%	30
	New York	19,061,841	4,282,268	672,832	391,831	9.2%	60
	Pennsylvania	12,354,826	5,527,391	771,229	455,017	8.2%	69
South Atlantic	Delaware	909,543	457,217	56,019	49,934	10.9%	5
	Florida	19,502,015	4,221,121	795,301	587,845	13.9%	65
	Georgia	9,838,303	4,154,719	683,663	510,055	12.3%	54
	Maryland	5,819,571	1,659,592	349,740	295,127	17.8%	40
	North Carolina	9,686,388	5,092,038	694,730	495,027	9.7%	53
	South Carolina	4,697,622	2,931,780	404,085	264,617	9.0%	40
	Virginia	8,061,947	3,038,643	502,197	264,474	8.7%	38
	West Virginia	1,797,297	1,682,122	311,179	99,470	5.9%	17
East North Central	Illinois	12,551,035	3,474,814	428,056	192,362	5.5%	38
	Indiana	6,400,632	3,000,065	393,981	312,332	10.4%	47
	Michigan	9,680,412	4,351,186	550,023	390,271	9.0%	67
	Ohio	11,275,553	4,638,947	588,631	423,608	9.1%	66
	Wisconsin	5,606,463	2,984,846	292,739	108,878	3.6%	22
East South Central	Alabama	4,722,823	2,898,637	401,709	258,342	8.9%	36
	Kentucky	4,281,075	2,700,953	380,190	253,613	9.4%	39
	Mississippi	2,894,844	2,286,943	363,373	237,869	10.4%	25
	Tennessee	6,394,154	3,321,611	527,021	416,771	12.5%	56
West North Central	Iowa	3,006,496	1,842,237	221,766	149,895	8.1%	25
	Kansas	2,819,203	1,431,128	181,944	89,428	6.2%	14
	Minnesota	5,316,464	2,389,401	350,160	236,350	9.9%	36
	Missouri	5,884,807	2,778,469	359,475	268,970	9.7%	36
	Nebraska	1,829,382	891,449	146,013	76,652	8.6%	11
	North Dakota	709,708	480,863	102,564	33,499	7.0%	4
	South Dakota	803,083	581,390	128,711	31,896	5.5%	6
West South Central	Arkansas	2,885,309	1,968,042	284,511	130,345	6.6%	20
	Louisiana	4,517,117	2,518,844	440,989	374,085	14.9%	31
	Oklahoma	3,765,615	1,973,377	309,153	144,971	7.3%	20
	Texas	26,355,323	7,340,556	1,596,652	1,284,661	17.5%	114
Mountain	Arizona	6,546,993	1,438,641	464,299	337,181	23.4%	26
	Colorado	5,242,152	1,349,323	210,600	108,504	8.0%	18
	Idaho	1,605,557	1,007,104	120,103	49,972	5.0%	9
	Montana	994,541	758,995	112,652	19,994	2.6%	5
	Nevada	2,801,783	407,144	82,175	43,617	10.7%	5
	New Mexico	2,039,545	1,101,620	268,110	153,105	13.9%	15
	Utah	2,902,703	808,644	150,706	94,961	11.7%	12
	Wyoming	568,798	444,406	49,723	7,383	1.7%	2
Pacific	California	37,833,318	5,204,618	767,988	491,139	9.4%	62
	Oregon	3,894,155	1,647,614	200,214	63,139	3.8%	13
	Washington	6,931,677	2,503,032	517,870	366,620	14.6%	47
Total		307,674,351	109,650,629	17,302,704	11,296,341	10.3%	1,472

While all Investment Areas are rural, some are more rural than others. The least dense Investment Area, south of Dubuque in eastern Iowa, has a population density of 17.4 people per square mile, with neighbors on average living about one quarter mile apart. The most dense and smallest Investment Area, in Ithaca, New York has a population density of almost 33,000 people per square mile—denser than much of Jersey City, New Jersey. The typical (median) Investment Area has a density of 258.1 people per square mile—about the density of Suffolk, Virginia.

Indeed, most Investment Areas are on the exurban fringe of urban areas, within five miles of the edge of the nearest urban center; a substantial share of Investment Areas across all Census Divisions are also located more than 15 miles from the nearest urban center. Table 3 presents the share of Investment Areas in each division that are located at increasing distances from the edge of the nearest urban center.

Table 3. Investment Area Distances from the Nearest Urban Center

Division	Total Investment Areas	Less than 5 Miles to Urban Center	5-10 Miles to Urban Center	10-15 Miles to Urban Center	More than 15 Miles to Urban Center
East North Central	239	48%	13%	8%	31%
East South Central	155	57%	10%	3%	30%
Middle Atlantic	160	46%	12%	13%	29%
Mountain	93	53%	9%	5%	33%
New England	74	55%	8%	11%	26%
Pacific	121	58%	10%	12%	21%
South Atlantic	311	58%	10%	7%	26%
West North Central	133	43%	12%	5%	41%
West South Central	186	64%	9%	6%	20%
All Divisions	1,472	54%	11%	8%	28%

Socioeconomically, the Investment Areas are generally similar to the rest of the rural United States. Table 4 presents socioeconomic differences between rural Investment Areas and rural non-Investment Areas across the country.

Table 4. Socioeconomics of Investment Areas, 2012-2016

Socioeconomics	Investment Areas	Other Rural Areas	All U.S.
Residents Under 18	23.7%	22.7%	23.1%
Residents 18 to 34	20.9%	20.7%	23.4%
Residents 35 to 64	40.4%	39.8%	39.0%
Residents 65 or Older	15.1%	16.8%	14.5%
Residents who are not non-Hispanic White	23.4%	21.6%	37.9%
Avg. Median Household Income	$57,516	$52,802	$60,698
Poverty Rate	13.8%	14.8%	14.9%
Unemployment Rate	7.4%	7.0%	7.4%

Overall, populations living in rural Investment Areas are also quite similar to the broader US population, with the notable exception of substantially lower percentages of residents of color (23% v. 38%), and slightly lower median incomes.

Using the Results of the Rural Food Access Investment Area Analysis

The RFAIA analysis identifies areas that are underserved by supermarkets and that have sufficient market support for place-based investments to improve access to fresh and healthy foods. The identification of these areas is only the beginning of the process for siting and scaling investments to improve food access with limited, or no, subsidy. Other factors remain relevant in making investment decisions, including population, number of households, household incomes, trends in those data points, the location of existing food retailers ("supply"), existing spending on retail food (demand), and the difference between supply and demand ("leakage"). Given the geographic expanse of many Investment Areas, knowing where people live within an Investment Area is vitally important. All these datapoints, with some geographic granularity, are available to the public on www.PolicyMap.com.

Size Matters

The first step in evaluating an Investment Area is to consider the number of people and households in the Investment Area.[5] Investment Areas with more people and households are more likely to be able to support larger retailers, potentially including full-service supermarkets. Investment Areas with fewer people and households are more likely to support only smaller-scale food retailers, including farmstands, farmers markets, mobile markets, and country stores. Reinvestment Fund's experience in financing food retail suggests that at least 5,000 residents in an establishment's trade area are necessary to support a full-service supermarket. Investment Areas closer to the 2,000 person minimum population threshold may be better suited to investment in an existing store or alternative place-based approaches to meet the needs of local residents.

It is also important to consider trends in population and households over time to understand whether the Investment Area has been growing over the past several years. A stable or growing population will tend to increase market support for an investment to improve food access. In an Investment Area with a declining population, investments in new food retailers may prove less sustainable. In areas experiencing population declines, a store preservation strategy may be more suitable. Investments in existing retailers can be less risky than investments in new retailers.

Resources Matter

Second, it is important to consider household incomes in the Investment Area. Higher-income households have greater ability to pay for fresh and healthy foods; lower-income households often struggle with food insecurity. That struggle is ameliorated somewhat by SNAP, but benefits may be inadequate, and, due to variation in state administration of the program as well as other factors, many people who are eligible for benefits are not enrolled.[6] An Investment Area with higher income households might be able to support a particular retailer in spite of the area's smaller population. But eventually higher income households start spending more of their additional dollars on non-food goods and services. For example, consider a typical two-person household with a before-tax annual income of

[5] Particularly in less populous areas, both population and households matter because demand for retail food does not increase linearly with each additional person if those people are part of the same household. According to the 2018 U.S. Bureau of Labor Statistics Consumer Expenditure Survey, the average 2-person consumer unit spends only 89% more on food at home than the average 1-person consumer unit. Subsequent 1-person increases in the size of the consumer unit are limited to 21% or less. Across many people and many households, those kinds of differences can make a difference to the bottom line of a smaller-scale food retailer.

[6] https://www.urban.org/research/publication/how-far-do-snap-benefits-fall-short-covering-cost-meal/view/full_report; https://www.fns.usda.gov/snap/trends-supplemental-nutrition-assistance-program-participation-rates-fiscal-year-2010

about $23,600 (slightly above the federal poverty guideline). On average, that household spends about $3,600 on food at home per year. In contrast, a two-person household with about twice that income (almost $43,000) spends about $4,100—only 13 percent more.[7] As with population and households, trends over the past several years are important to consider. All things equal, retailers in Investment Areas with increasing resident incomes should perform better than retailers in Investment Areas with decreasing incomes; any investment strategy should therefore account for the existing trend, and where those resident incomes are lower, contemplate the need for public subsidy of one form or another.

The Marketplace Matters

Third, it is also important to consider the location, type, price points, selection, and quality (or perceived quality) of existing retailers. These stores are, or will be, the competitors to any supported retailer.

The RFAIA analysis (like the LSA analysis) evaluates areas based on their distance to the nearest full-service supermarket; distance to smaller, limited-service retailers is not evaluated. This means that many Investment Areas likely have existing limited-service retailers. Any new or expanded retailer will be in competition with other 'local retailers', whether that retailer is a new full-service supermarket or a smaller-scale retailer like a farmstand, farmers market, mobile market, or country store.

In addition, sometimes there is a supermarket located just outside an Investment Area. If that supermarket is easily accessible from the Investment Area (for example, if a major road or highway runs directly from the Investment Area to the supermarket), many underserved residents may choose to bypass a new retailer to continue shopping at the supermarket outside the Investment Area. This is perhaps most likely in a smaller Investment Area if the new retailer is relatively small and/or offers a more limited range of products than the supermarket. Where there is a choice, most people prefer to do their primary grocery shopping at a supermarket or supercenter, even if that means travelling farther.[8] In fact, most people do not shop at their nearest store, even when that store is a supermarket or supercenter, likely for reasons related to price, selection, quality and commuting patterns.[9]

Leakage Matters

Finally, sales volume at existing food retailers provides a measure of existing supply, and estimated spending on retail food represents a measure of demand. The difference between the two (demand minus supply) is called leakage. Leakage represents an estimate of demand for retail food that is not met by local supply.

Several millions of dollars of leakage from an Investment Area suggests that there is likely demand that could be fulfilled by a new food retailer. Little to no leakage implies that most demand is already being met locally. Reinvestment Fund's experience in financing food retail (principally in more urban areas) suggests that a new retailer is likely to be able to capture about one-third of local leakage, due in part to factors like transportation infrastructure, neighborhood boundaries, and personal preferences for particular store types, marketing groups, etc. Supply, demand, and leakage data are available at the block group level on www.PolicyMap.com.

[7] 2018 U.S. Bureau of Labor Statistics Consumer Expenditure Survey; https://www.bls.gov/cex/
[8] https://www.ers.usda.gov/webdocs/publications/43953/eib138_errata.pdf?v=2948.4
[9] Ibid.

Summary

The RFAIA analysis represents a first-of-its-kind attempt to identify rural parts of the country that may be well suited for place-based interventions to enhance access to fresh and healthy foods. Built on an established methodology for identifying urban and suburban limited-access areas and three decades of experience financing healthy food retail solutions to food instability, the RFAIA analysis supports a data-driven approach to strategic investing into some of the highest-need rural parts of the country.

The results of this analysis are a starting point for rigorously analyzing potential investments to improve access to fresh and healthy foods in underserved rural areas. The 1,472 Investment Areas are likely not universally well suited for investment—rather their designation provides initial guidance for those working to promote access to fresh and healthy foods in some of the country's more remote areas. As Reinvestment Fund and other investors in healthy food retail begin using the results of this analysis, future iterations will build additional refinements into the analysis—refinements grounded in the real world experiences of strategic investors whose collective efforts continue to enhance the quality of life in all the communities we serve, no matter how big or how small.

APPENDIX

Appendix—Investment Areas, By Division

The following pages present maps and summary tables detailing key characteristics of rural Investment Areas across 9 Census Divisions across the lower 48 states: New England, Middle Atlantic, South Atlantic, East North Central, East South Central, West North Central, West South Central, Mountain, and Pacific. All socio-demographic data presented in the following maps were derived from Reinvestment Fund's analysis of U.S. Census Bureau 2012-2016 American Community Survey, 5-Year Estimates.[10]

Each map is accompanied by tables presenting the following metrics:

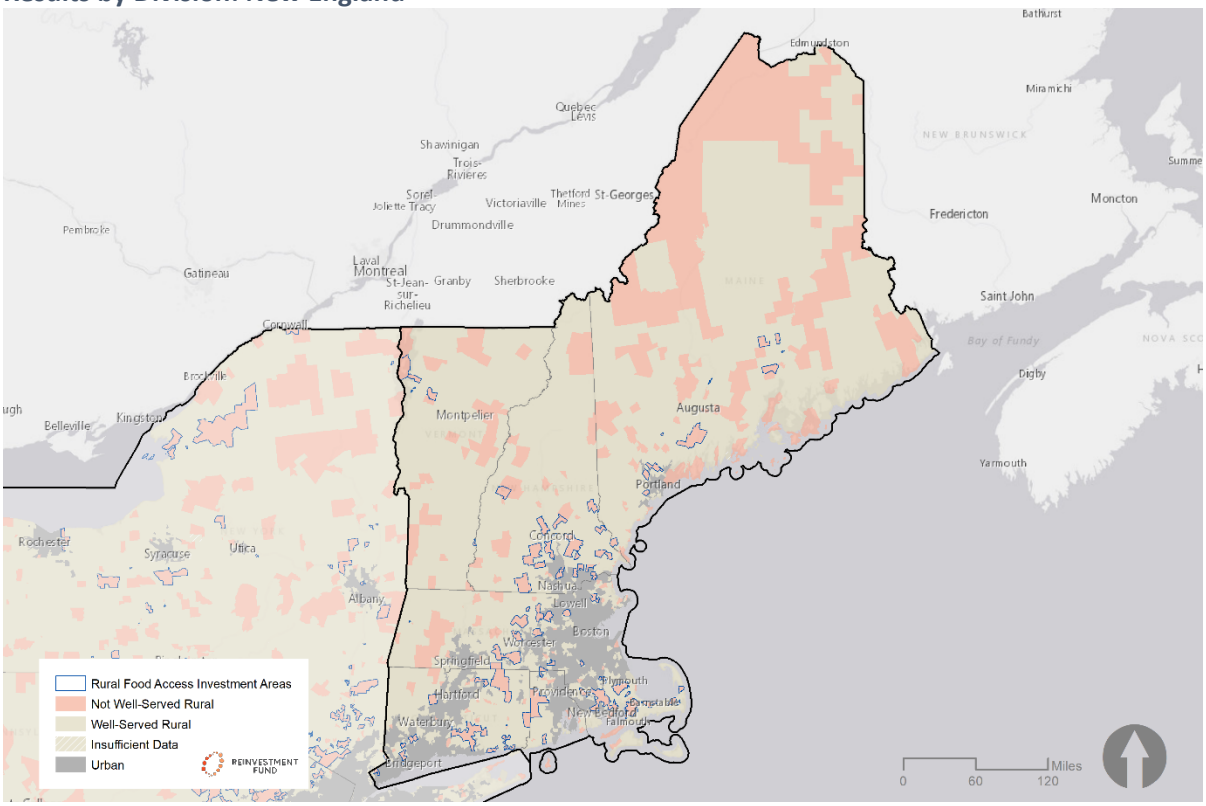
- Total Population in the Division
- Rural Population in the Division
- Population Living in Underserved Rural Areas in the Division
- Number of Investment Areas in the Division
- Population Living in Investment Areas in the Division
- Median Population Size for Investment Areas in the Division
- Median Investment Area Size (square miles)
- Median Investment Area Population Density (population per square mile)
- The Average Low Access Score for Investment Areas in the Division
- The Average Number of Miles Residents in Investment Areas Must Travel to the Nearest Supermarket

In addition to these metrics related to the overall population and food access in each Division, a second summary table presents comparisons between Investment Areas and other rural areas in each Division along the following socio-demographic indicators:

- Age of Residents
- Race/Ethnicity of Residents
- Median Household Incomes
- Poverty Rate
- Unemployment Rate

[10] 2012-16 ACS estimates were used to align with the data used for the 2018 LSA Analysis, which relied on the 2016 location of supermarkets throughout the country. See https://www.reinvestment.com/wp-content/uploads/2018/08/LSA_2018_Report_web.pdf

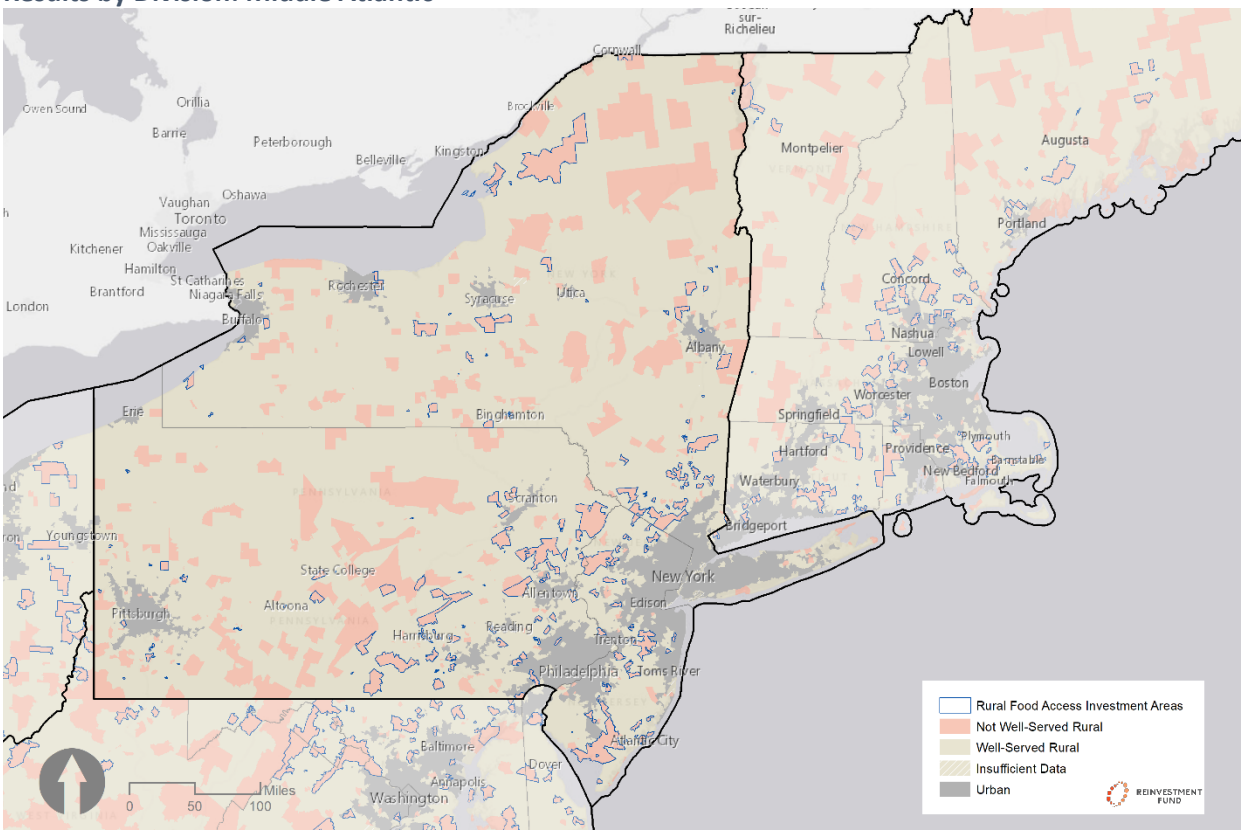
Results by Division: New England



New England Division Results at a Glance, 2012-16	
Total Population	14,668,879
Rural Population	4,974,875
Underserved Rural Population	805,183
Number of Priority Investment Areas	74
Population in Investment Areas	496,789
Median Investment Area Population	4,743
Median Investment Area Size (sq. mi.)	17.1
Median Investment Area Density (pop./sq. mi.)	358.5
Average Investment Area Limited Access Score	0.48
Average Miles to Nearest Supermarket	5.1

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	21.0%	19.8%	20.6%
Residents 18 to 34	20.2%	19.4%	22.9%
Residents 35 to 64	43.7%	42.9%	40.8%
Residents 65 or Older	15.1%	17.9%	15.7%
Residents of Color	9.8%	8.5%	23.3%
Avg. Median Household Income	$81,541	$66,900	$74,134
Poverty Rate	8.2%	9.6%	10.8%
Unemployment Rate	5.7%	5.8%	6.8%

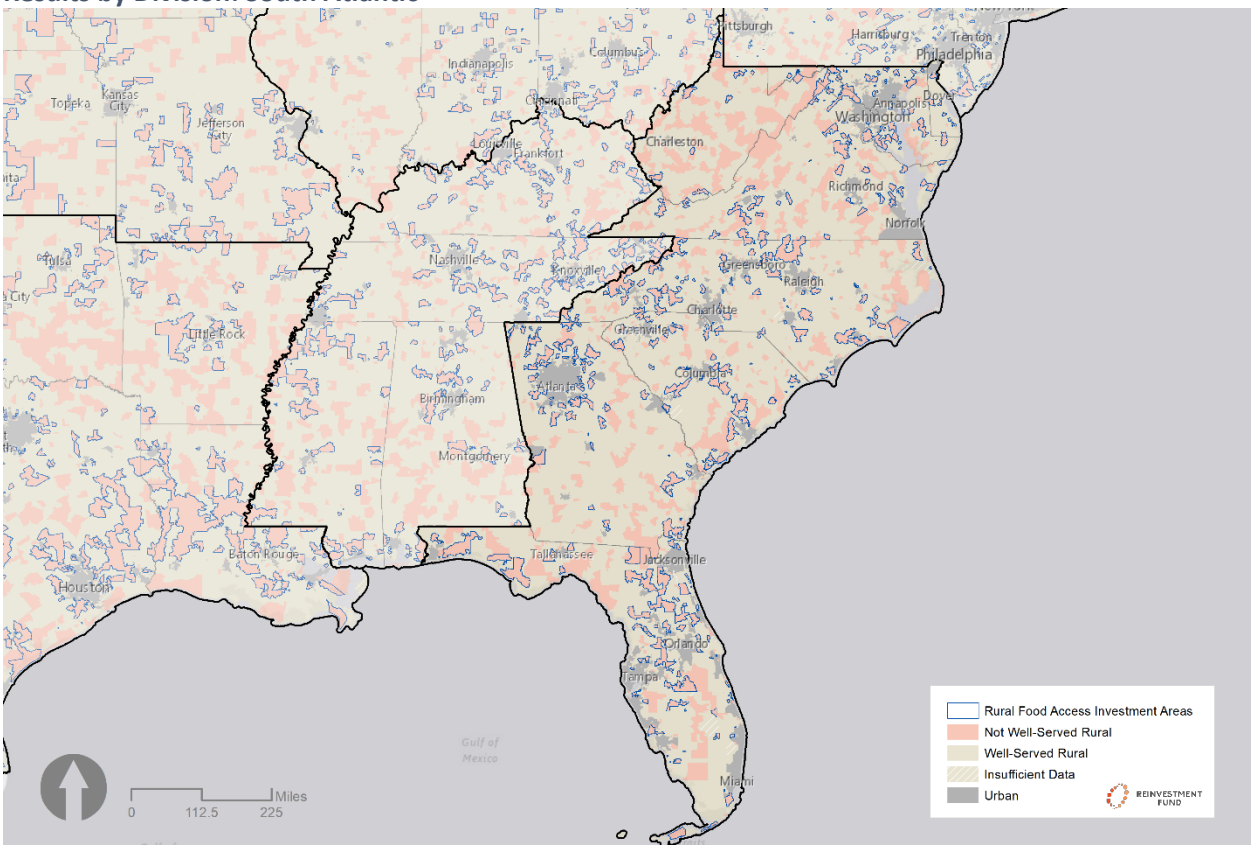
Results by Division: Middle Atlantic



Middle Atlantic Division Results at a Glance, 2012-16	
Total Population	41,339,411
Rural Population	11,538,400
Underserved Rural Population	1,839,111
Number of Priority Investment Areas	160
Population in Investment Areas	1,148,088
Median Investment Area Population	4,535
Median Investment Area Size (sq. mi.)	7.9
Median Investment Area Density (pop./sq. mi.)	663.8
Average Investment Area Limited Access Score	0.52
Average Distance to Nearest Supermarket	4.2

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	23.6%	20.7%	21.6%
Residents 18 to 34	22.8%	20.6%	23.2%
Residents 35 to 64	39.8%	41.2%	39.9%
Residents 65 or Older	13.8%	17.5%	15.3%
Residents of Color	26.9%	12.2%	37.0%
Avg. Median Household Income	$59,417	$60,130	$68,584
Poverty Rate	15.3%	11.2%	13.5%
Unemployment Rate	8.4%	6.6%	7.5%

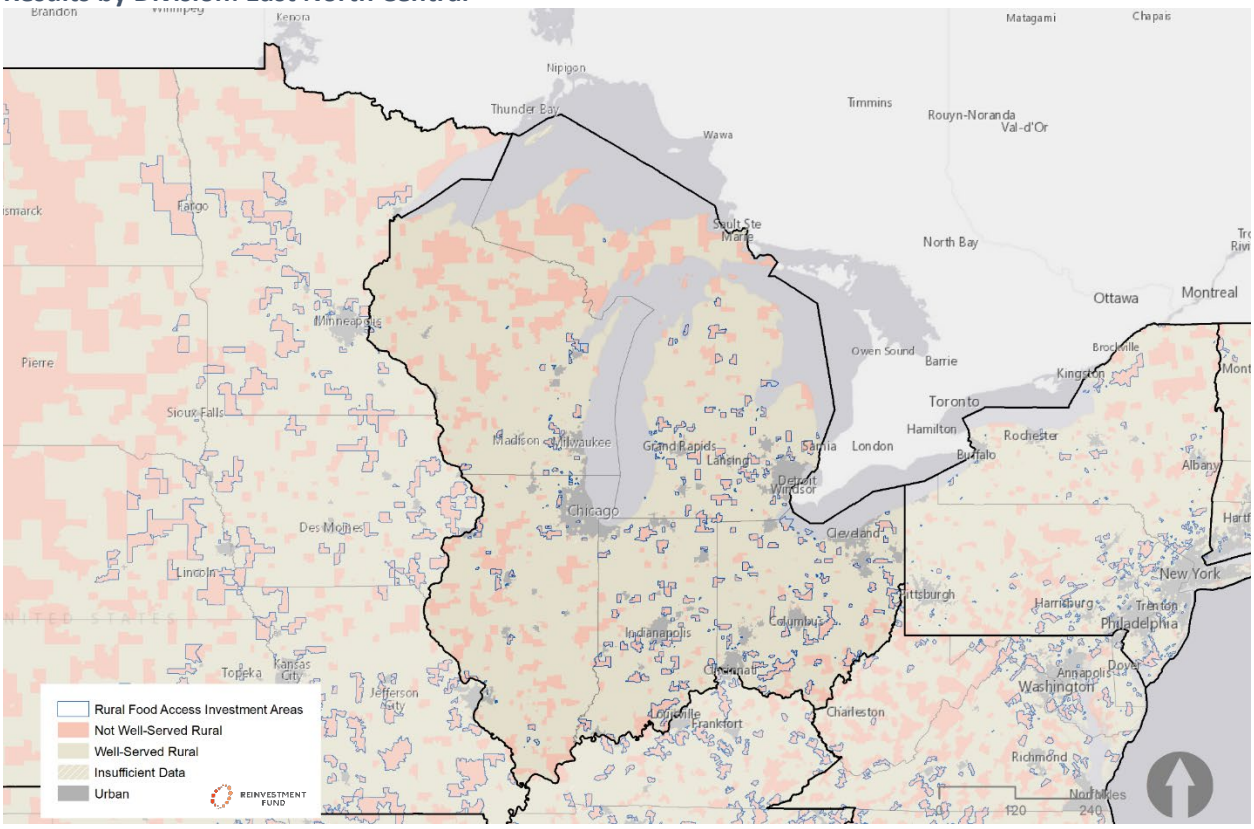
Results by Division: South Atlantic



South Atlantic Division Results at a Glance, 2012-16	
Total Population	62,555,740
Rural Population	23,995,253
Underserved Rural Population	3,981,883
Number of Priority Investment Areas	311
Population in Investment Areas	2,686,089
Median Investment Area Population	5,330
Median Investment Area Size (sq. mi.)	39.5
Median Investment Area Density (pop./sq. mi.)	273.1
Average Investment Area Limited Access Score	0.49
Average Distance to Nearest Supermarket	6.6

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	22.3%	21.9%	22.1%
Residents 18 to 34	20.4%	20.5%	22.8%
Residents 35 to 64	40.5%	39.9%	39.4%
Residents 65 or Older	16.7%	17.7%	15.7%
Residents People of Color	22.4%	28.2%	40.9%
Avg. Median Household Income	$56,403	$49,605	$58,587
Poverty Rate	13.9%	16.8%	15.4%
Unemployment Rate	7.8%	8.0%	7.8%

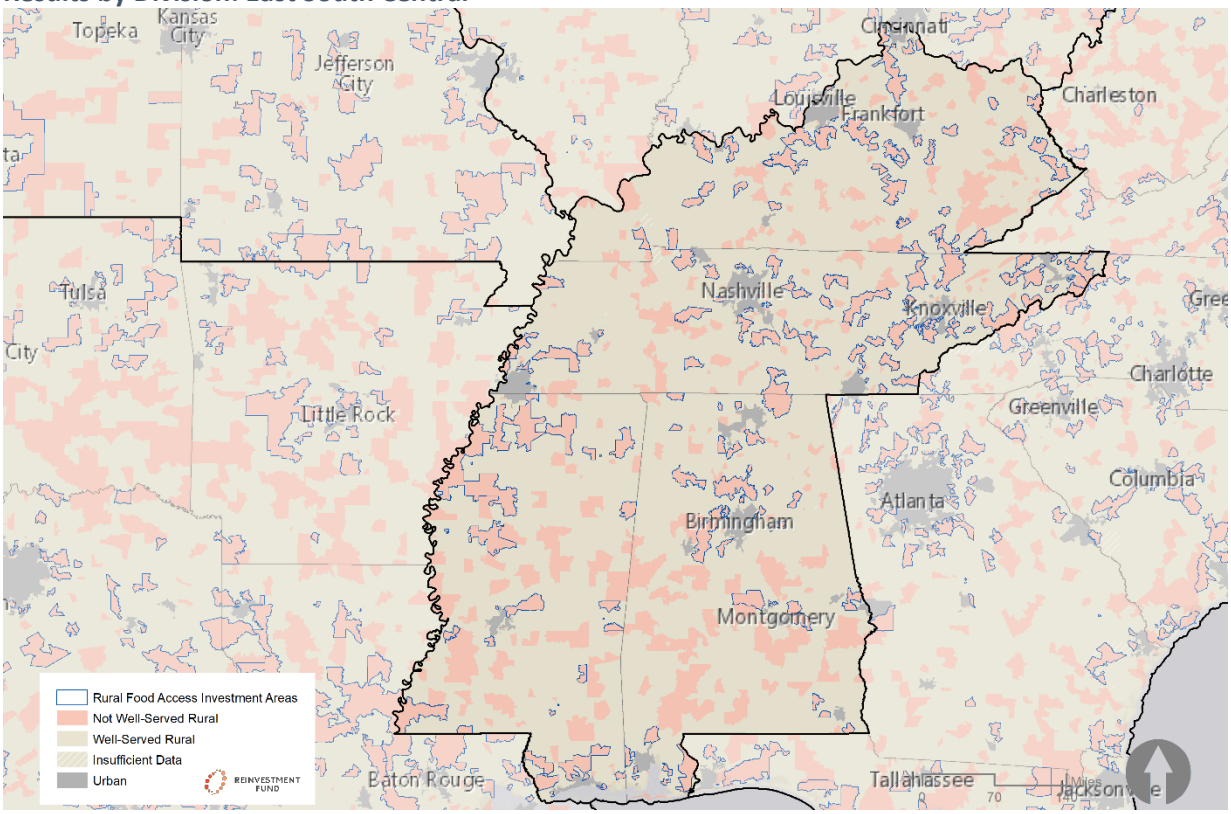
Results by Division: East North Central



East North Central Division Results at a Glance, 2012-16	
Total Rural Population	18,995,840
Underserved Rural Population	2,327,940
Number of Priority Investment Areas	239
Population in Investment Areas	1,463,097
Median Investment Area Population	4,382
Median Investment Area Size (sq. mi.)	32.2
Median Investment Area Density (pop./sq. mi.)	179.2
Average Investment Area Limited Access Score	0.48
Average Distance to Nearest Supermarket	6.4

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	23.4%	22.7%	23.0%
Residents 18 to 34	20.5%	20.0%	22.7%
Residents 35 to 64	41.6%	40.6%	39.5%
Residents 65 or Older	14.5%	16.8%	14.8%
Residents People of Color	10.7%	9.8%	25.5%
Avg. Median Household Income	$54,424	$53,729	$55,775
Poverty Rate	13.0%	12.4%	14.5%
Unemployment Rate	7.2%	6.4%	7.5%

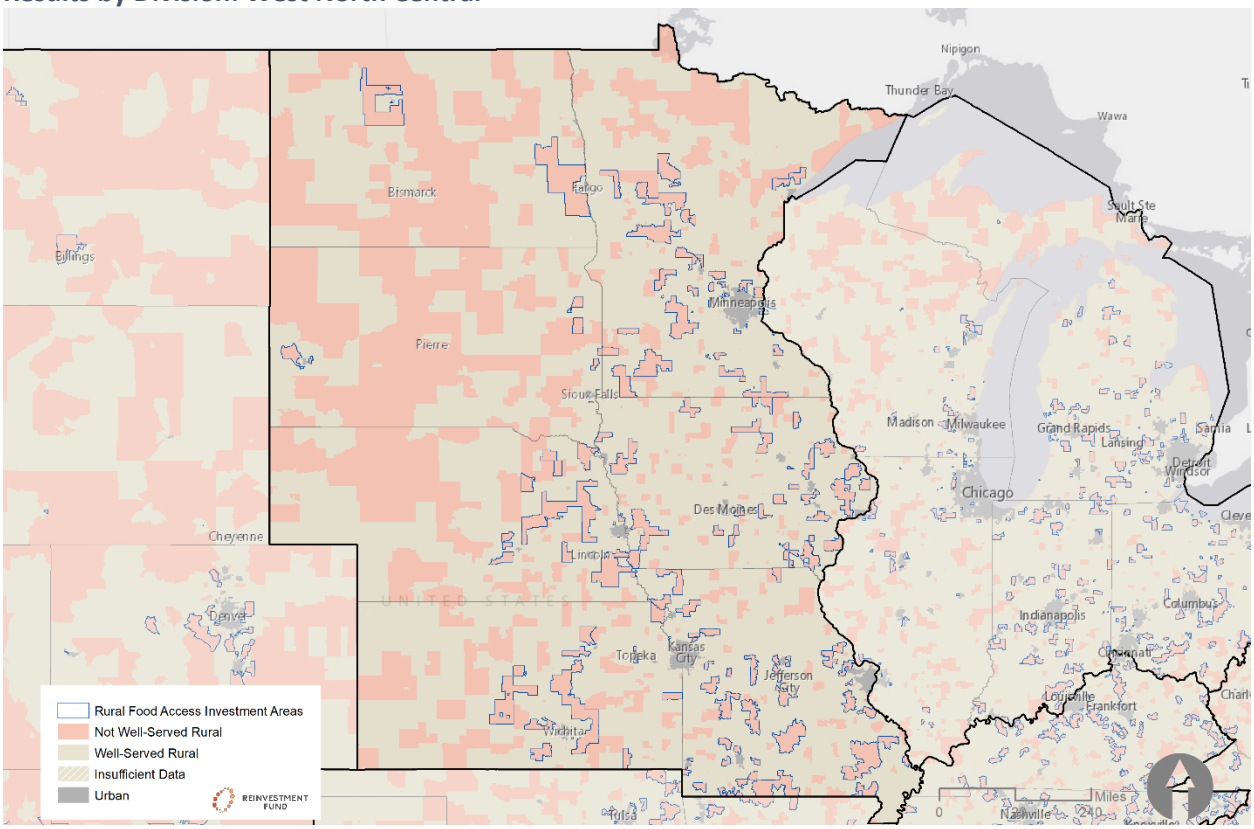
Results by Division: East South Central



East South Central Division Results at a Glance, 2012-16	
Total Rural Population	11,455,935
Underserved Rural Population	1,665,745
Number of Priority Investment Areas	155
Population in Investment Areas	1,149,213
Median Investment Area Population	4,836
Median Investment Area Size (sq. mi.)	57.4
Median Investment Area Density (pop./sq. mi.)	106.7
Average Investment Area Limited Access Score	0.47
Average Miles to Nearest Supermarket	7.6

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	23.6%	23.0%	23.1%
Residents 18 to 34	20.0%	21.0%	22.8%
Residents 35 to 64	41.7%	39.8%	39.1%
Residents 65 or Older	14.7%	16.3%	14.9%
Residents People of Color	16.3%	21.4%	27.9%
Avg. Median Household Income	$47,823	$42,261	$46,045
Poverty Rate	16.4%	19.6%	18.8%
Unemployment Rate	8.0%	8.4%	8.0%

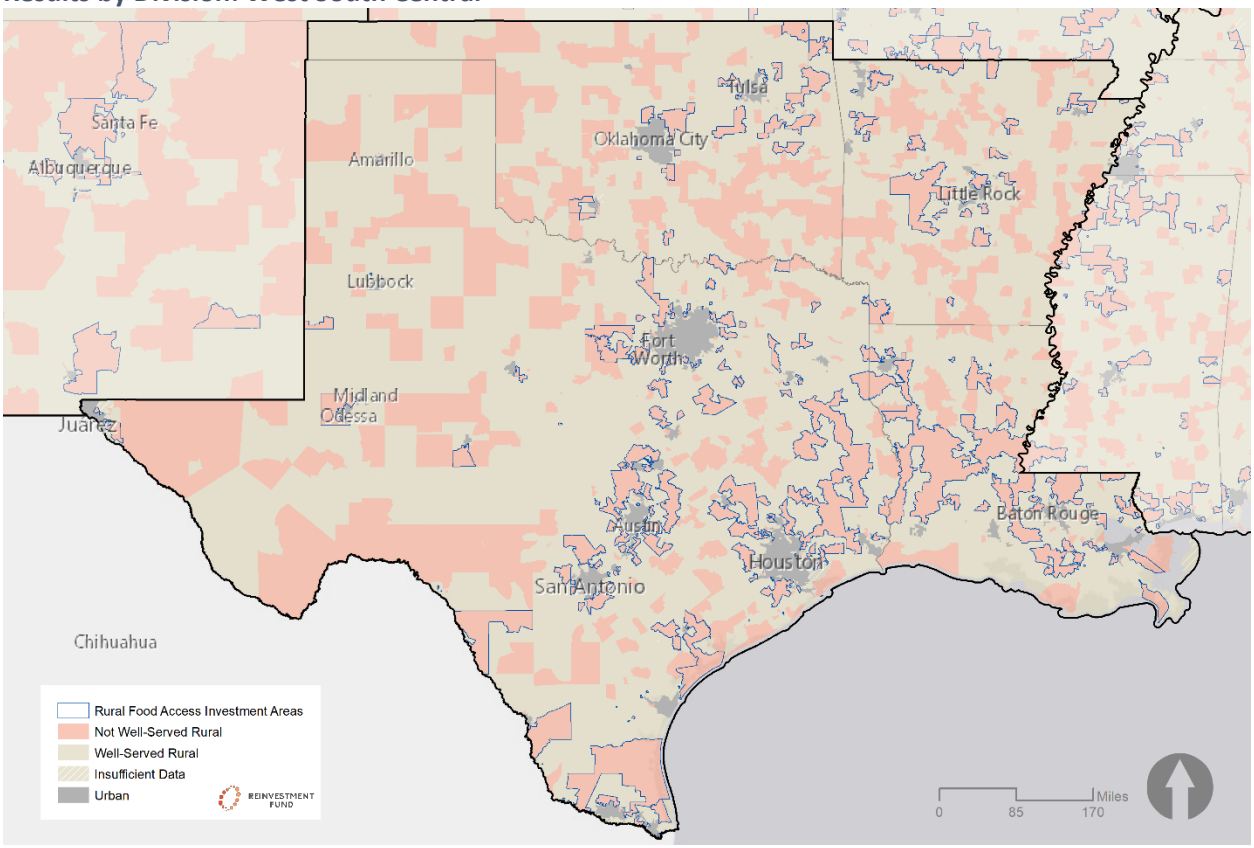
Results by Division: West North Central



West North Central Division Results at a Glance, 2012-16	
Total Population	20,978,450
Rural Population	10,734,517
Underserved Rural Population	1,542,307
Number of Priority Investment Areas	133
Population in Investment Areas	924,145
Median Investment Area Population	4,648
Median Investment Area Size (sq. mi.)	157.7
Median Investment Area Density (pop./sq. mi.)	36.0
Average Investment Area Limited Access Score	0.49
Average Miles to Nearest Supermarket	11.0

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	24.4%	23.9%	23.7%
Residents 18 to 34	20.7%	20.5%	23.2%
Residents 35 to 64	39.4%	38.7%	38.2%
Residents 65 or Older	15.4%	16.9%	14.9%
Residents People of Color	8.1%	11.2%	18.6%
Avg. Median Household Income	$58,203	$53,559	$57,311
Poverty Rate	10.1%	12.5%	12.8%
Unemployment Rate	4.6%	4.8%	5.2%

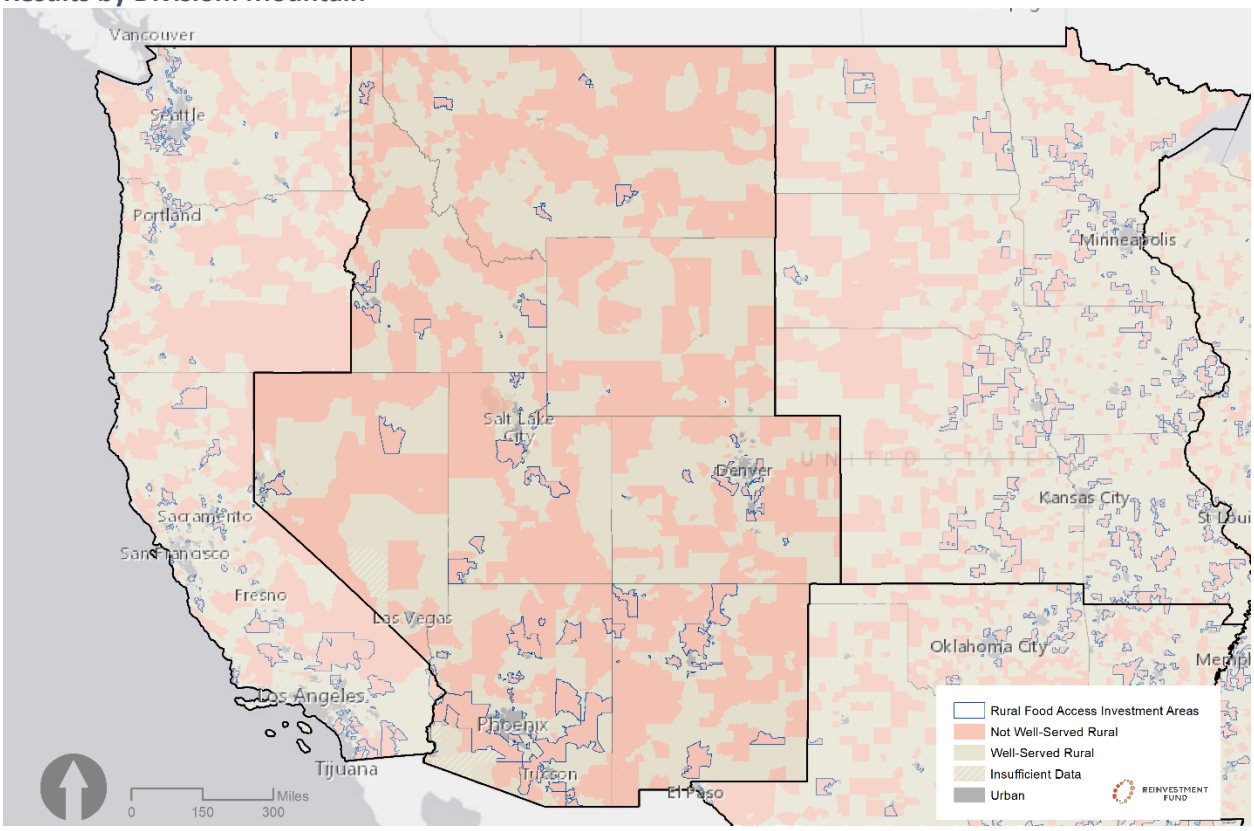
Results by Division: West South Central



West South Central Division Results at a Glance, 2012-16	
Total Population	38,440,244
Rural Population	14,303,942
Underserved Rural Population	2,733,220
Number of Priority Investment Areas	186
Population in Investment Areas	1,974,246
Median Investment Area Population	6,011
Median Investment Area Size (sq. mi.)	51.7
Median Investment Area Density (pop./sq. mi.)	216.2
Average Investment Area Limited Access Score	0.5
Average Miles to Nearest Supermarket	7.4

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	26.1%	24.7%	25.8%
Residents 18 to 34	20.7%	21.8%	24.4%
Residents 35 to 64	39.6%	38.1%	37.5%
Residents 65 or Older	13.7%	15.5%	12.4%
Residents People of Color	37.3%	35.1%	50.0%
Avg. Median Household Income	$54,113	$47,580	$54,419
Poverty Rate	15.2%	17.2%	17.1%
Unemployment Rate	6.9%	6.8%	6.6%

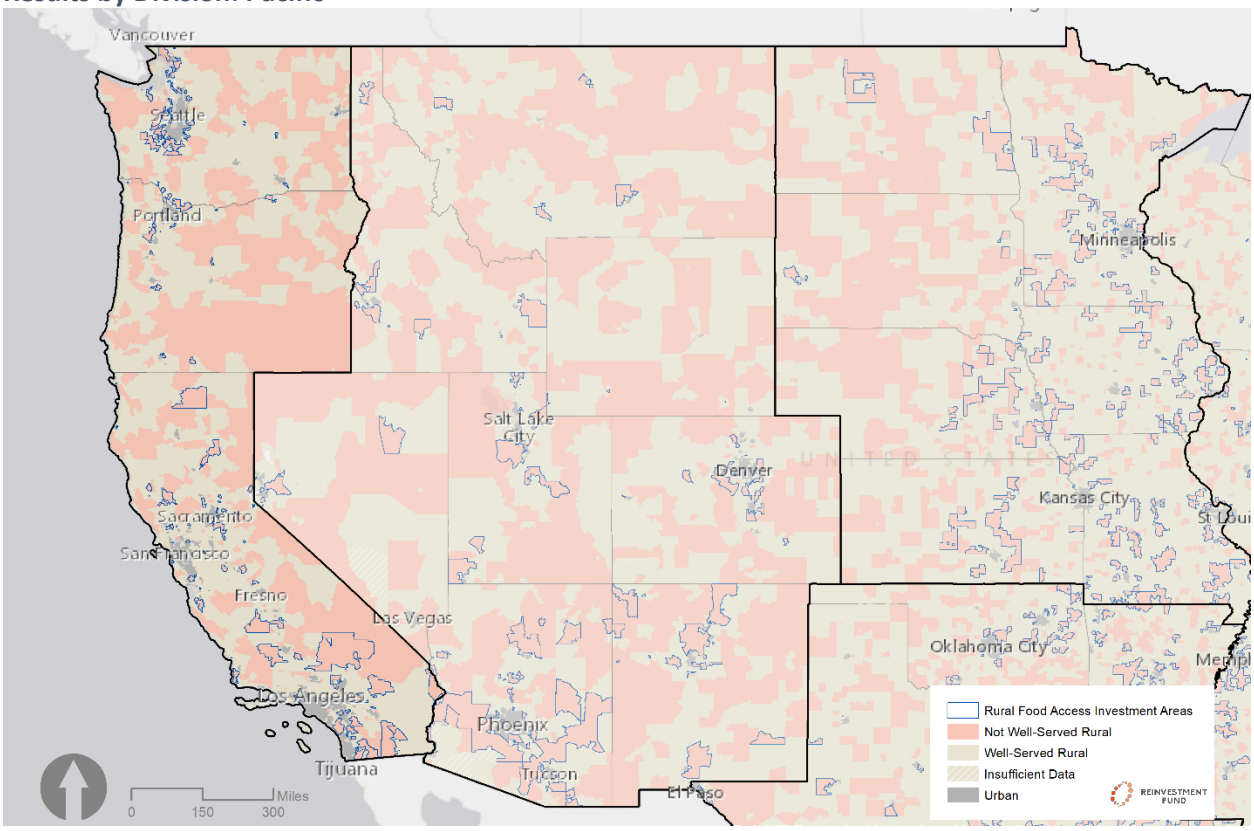
Results by Division: Mountain



Mountain Division Results at a Glance, 2012-16	
Total Population	23,170,561
Rural Population	7,539,211
Underserved Rural Population	1,538,853
Number of Priority Investment Areas	93
Population in Investment Areas	854,432
Median Investment Area Population	5,553
Median Investment Area Size (sq. mi.)	62.6
Median Investment Area Density (pop./sq. mi.)	195.6
Average Investment Area Limited Access Score	0.55
Average Miles to Nearest Supermarket	9.6

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	24.7%	24.6%	24.7%
Residents 18 to 34	20.2%	20.9%	23.9%
Residents 35 to 64	39.0%	38.3%	37.4%
Residents 65 or Older	16.1%	16.2%	14.0%
Residents People of Color	36.0%	28.5%	36.1%
Avg. Median Household Income	$57,566	$53,879	$58,657
Poverty Rate	14.6%	15.4%	15.3%
Unemployment Rate	8.6%	6.9%	7.0%

Results by Division: Pacific



Pacific Division Results at a Glance, 2012-16	
Total Population	49,702,394
Rural Population	9,670,795
Underserved Rural Population	1,600,407
Number of Priority Investment Areas	121
Population in Investment Areas	980,384
Median Investment Area Population	4,881
Median Investment Area Size (sq. mi.)	24.7
Median Investment Area Density (pop./sq. mi.)	368.6
Average Investment Area Limited Access Score	0.52
Average Miles to Nearest Supermarket	5.9

Socioeconomics	Investment Areas	Other Rural Areas	All Division
Residents Under 18	23.4%	23.2%	23.3%
Residents 18 to 34	22.9%	21.1%	24.7%
Residents 35 to 64	38.9%	39.1%	38.7%
Residents 65 or Older	14.9%	16.6%	13.3%
Residents People of Color	32.1%	35.5%	54.0%
Avg. Median Household Income	$68,143	$58,702	$70,413
Poverty Rate	13.2%	15.8%	15.0%
Unemployment Rate	9.0%	8.9%	8.4%

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