

# Census Tract Level State Maps of the Modified Retail Food Environment Index (mRFEI)

## Background/Purpose

In April 2011, the CDC's Division of Nutrition, Physical Activity and Obesity released the [Children's Food Environment State Indicator Report, 2011](#). One indicator featured in the report is the modified retail food environment index (mRFEI). The mRFEI measures the number of healthy and less healthy food retailers within census tracts across each state as defined by typical food offerings in specific types of retail stores (e.g., supermarkets, convenience stores, or fast food restaurants).



Out of the total number of food retailers considered healthy or less healthy in a census tract, the mRFEI represents the percentage that are healthy. While the report includes median mRFEI values for each state, there is substantial variability in the retail

food environment within states. The maps included in the current release provide a useful starting place to identify specific geographic areas of states that could benefit from further examination of the retail food environment. The maps can identify census tracts that either lack access to healthy food retailers such as supermarkets or contain very high densities of fast food restaurants and convenience stores relative to the number of healthy food retailers.

## How is the mRFEI calculated?

The mRFEI is calculated for each census tract using the following formula:

$$mRFEI = 100 \times \frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}}$$

Healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores within census tracts or ½ mile from the tract boundary. The following stores as defined by North American Industry Classification Codes (NAICS) were included: supermarkets and larger grocery stores (NAICS 445110; supermarkets further defined as stores with  $\geq 50$  annual payroll employees and larger grocery stores defined as stores with 10–49 employees); fruit and vegetable markets (NAICS 445230); warehouse clubs (NAICS 452910). Fruit and vegetable markets include establishments that sell produce and include markets and permanent stands.



Less healthy food retailers include fast food restaurants, small grocery stores, and convenience stores within census tracts or ½ mile from the tract boundary. Fast food stores were defined according to NAICS code 722211 (fast food restaurants). Convenience stores were defined according to NAICS code 445120 (convenience stores) or NAICS code 445110 (small groceries) where the number of employees was three or fewer.

## How is the mRFEI different from other measures of the food environment such as food deserts and food swamps?

Food deserts are areas that lack access to affordable fruits, vegetables, whole grains, low-fat/non-fat milk or dairy alternatives, and other foods that make up the full range of a healthy diet.<sup>1,2</sup> Food swamps have been defined as "areas in which large relative amounts of energy-dense snack foods, inundate healthy food options."<sup>3</sup> The mRFEI combines the concepts of "food desert" and "food swamp" into a single measure. Scores of zero generally correspond with the concept of food deserts. Among mRFEI scores greater than zero, lower scores correspond with the concept of food swamps.

## What defines a healthy food retailer or less healthy food retailer according to the mRFEI?

As defined above, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with three or fewer employees. These classifications are based on typical food offerings in these types of retailers. The mRFEI was calculated on the basis of available data on every food retailer around the country. Therefore, it was not possible to assess the foods

actually offered in each store. Rather, stores were classified as healthy or less healthy based on typical food offerings in these types of retailers as defined by existing research.<sup>4-7</sup> Examples of available healthy foods include fruits and vegetables, low-fat dairy items, meat products, and whole grain foods.<sup>4</sup> Adequate access to healthy foods may still be achieved if smaller food stores and fast food restaurants provide quality and affordable healthy foods and beverages. Why aren't farmers' markets included?



### Why aren't farmers' markets included?

At the time the mRFEI scores were calculated, national data on the location of farmers' markets was not available. States and localities are encouraged to include any data they have available on farmers' markets in their own jurisdictions when they assess the retail food environment.

### What do the numbers mean?

The modified Retail Food Environment Index (mRFEI) is a way of measuring the number of healthy and less healthy food retailers in an area using a single number. Out of the total number of food retailers in that area considered either healthy or less healthy, the mRFEI represents the percentage that are healthy. Therefore, lower scores indicate that census tracts contain many convenience stores and/or fast food restaurants compared to the number of healthy food retailers. A zero score indicates that no healthy food retailers (supermarkets, large grocery stores, produce stores or supercenters) are located in the census tract.

When the mRFEI was calculated, the distribution of more than 1 million supermarkets, produce stores, supercenters, fast food restaurants, and convenience stores located throughout the country was examined. An mRFEI score of

10 means that only 10 out of every 100 of these stores were likely to offer healthy foods such as fruits and vegetables, low-fat dairy items, meat products, and whole grain foods. These include the supermarkets, produce stores, and supercenters. The other 90 stores were unlikely provide access to healthy foods. These include convenience stores, small grocery stores, and fast food restaurants.

### What is a census tract?

Census tracts are relatively permanent subdivisions of a county and usually have between 2,500 and 8,000 people. Census tracts do not cross county boundaries. They are designed, when established, to be homogeneous with respect to population characteristics, economic status, and living conditions. Therefore, the spatial size of census tracts varies widely depending on population density. Census tract boundaries are established to be relatively stable over time to allow comparisons from one census to another. See the [U.S. Census Bureau web page about census tracts and block numbering areas](#) for more information.

### What action steps can be taken based on the information provided in these maps?

State and local officials can next perform a more detailed survey of the areas that lack access to healthy food by using a variety of tools. For statewide initiatives, health or economic development officials can purchase retail data to map the precise actual locations of retail food providers throughout the state, or work with partners that have purchased data or conducted an assessment. For smaller areas, a local survey of the current food environment can be performed using basic online tools such as Google™ or Bing™ maps; however, these have the same data limitations as other secondary data sources (such as having a lag time between capturing newly opened and recently closed food retail businesses). Physically surveying these areas can confirm locations of different types of stores. There are also survey tools to assess the actual availability of healthier food options in small and large retail food stores and restaurants.



For more information on assessing healthier food retail, see CDC's Division of Physical Activity, Nutrition, and Obesity fact sheet [Healthier Food Retail: Beginning the Assessment Process in Your State or Community](#). This document provides an overview of steps state or local public health practitioners can take to initiate an assessment of the food retail environment in their area. [The Food Environment Atlas](#) and [Food Desert Locator](#) are additional online tools available from USDA that may be helpful in assessing the food environment in your area.

Once the food landscape is assessed, initiatives can be taken to locate supermarkets or grocery stores in underserved areas. There are also options to provide incentives and assistance for existing food stores, including corner convenience stores, to provide healthier food choices such as fresh, frozen, and canned fruits and vegetables, low-fat dairy and meat products, and whole grain foods.

### **Can I get the raw data on which the maps are based?**

Unfortunately, most of the raw data on individual retail stores was purchased under a contractual agreement from private market research companies. These data are proprietary information from these companies and cannot be distributed by CDC. However, mRFEI scores according to census tract are available at

[http://www.cdc.gov/obesity/downloads/2\\_16\\_mrfei\\_data\\_table.xls](http://www.cdc.gov/obesity/downloads/2_16_mrfei_data_table.xls).



## References

1. Beaulac J, Kristjansson E, Cummins S. A systematic review of food deserts, 1966–2007. *Prev Chronic Dis*. 2009 ;6(3):A105.
2. U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2010*. 7th Edition, Washington, DC: U.S. Government Printing Office; 2010.
3. Rose D, Bodor JN, Swalm CM, Rice JC, Farley TA, Hutchinson PL. Deserts in New Orleans? Illustrations of urban food access and implications for policy. Electronic conference proceedings from Understanding the Economic Concepts and Characteristics of Food Access, UM-National Poverty Center and USDA-Economics Research Service, January; 2009, Washington, DC. Available at <http://www.npc.umich.edu/news/events/food-access/index.php>.
4. Glanz K, Sallis JF, Saelens BE, Frank LD. Nutrition Environment Measures Survey in stores (NEMS-S): development and evaluation. *Am J Prev Med*. 2007;32(4):282–9.
5. Gebauer H, Laska MN. Convenience Stores surrounding urban schools: an assessment of healthy food availability, advertising, and product placement. *J Urban Health*. 2011;88(4):616-22.
6. Bustillos B, Sharkey JR, Anding J, McIntosh A. Availability of more healthful food alternatives in traditional, convenience, and nontraditional types of food stores in two rural Texas counties. *J Am Diet Assoc*. 2009;109(5):883–9.
7. Connell CL, Yadrick MK, Simpson P, Gossett J, McGee BB, Bogle ML. Food supply adequacy in the Lower Mississippi Delta. *J Nutr Educ Behav*. 2007;39(2):77–83.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

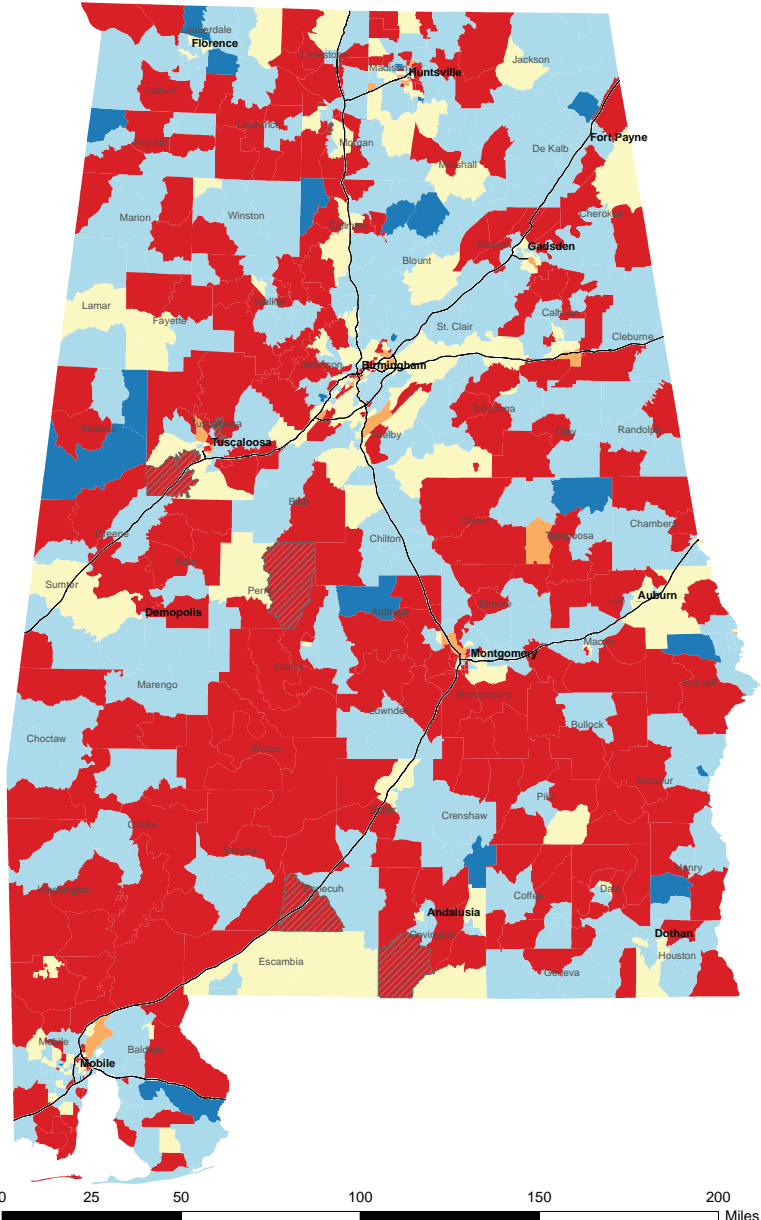
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - IntUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## Alabama

### Modified Retail Food Environment Index According to Census Tract



National mRFEI Score = 10  
 Alabama mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\text{\# Healthy Food Retailers}}{\text{\# Healthy Food Retailers} + \text{\# Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. ‡

† Data sources are listed in the legend.

# Alaska

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

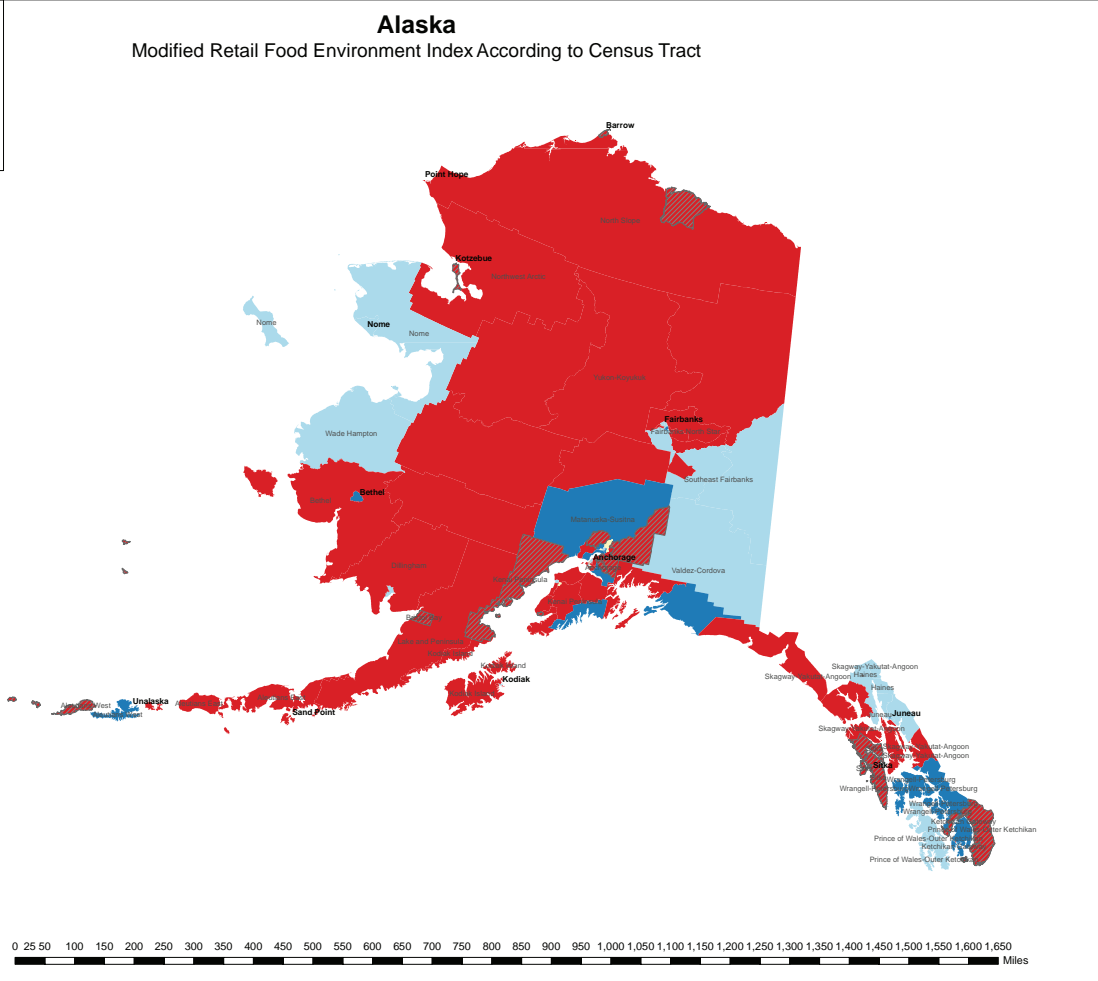
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCE(S):**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2009  
 Fast food restaurants - NAVTEQ 2009

Date of map: September, 2011

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways

National mRFEI Score = 10  
 Alaska mRFEI Score = 6



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

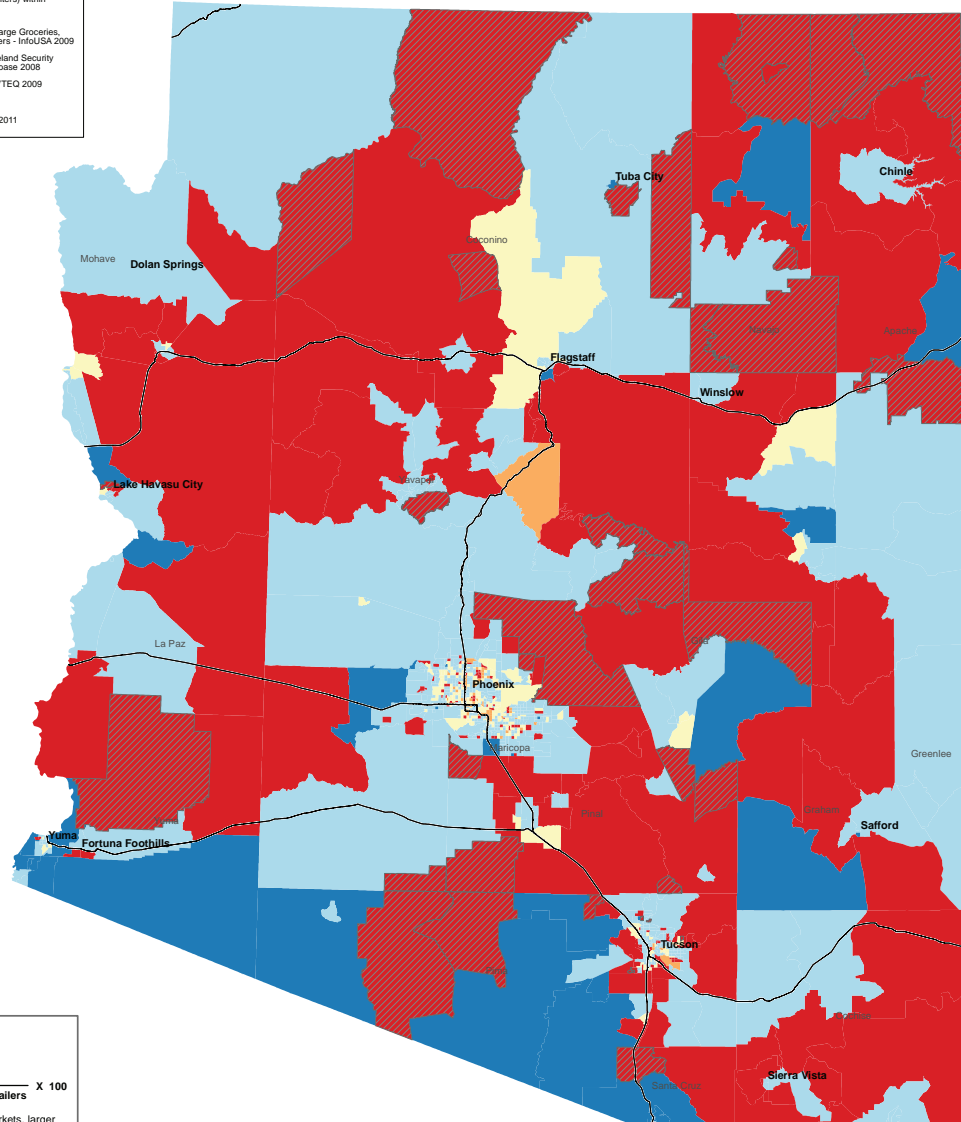
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

# Arizona

## Modified Retail Food Environment Index According to Census Tract



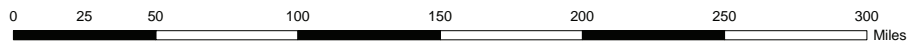
National mRFEI Score = 10  
 Arizona mRFEI Score = 12

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



# Arkansas

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways

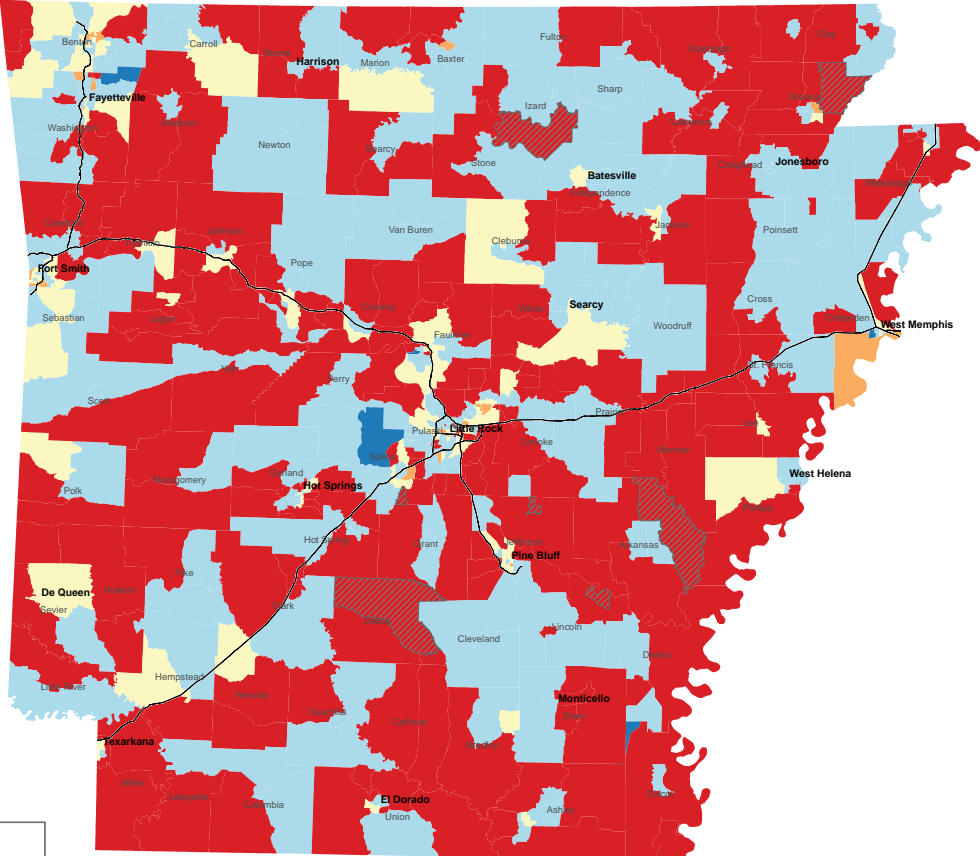
Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

DATA SOURCES:  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

National mRFEI Score = 10  
 Arkansas mRFEI Score = 9



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

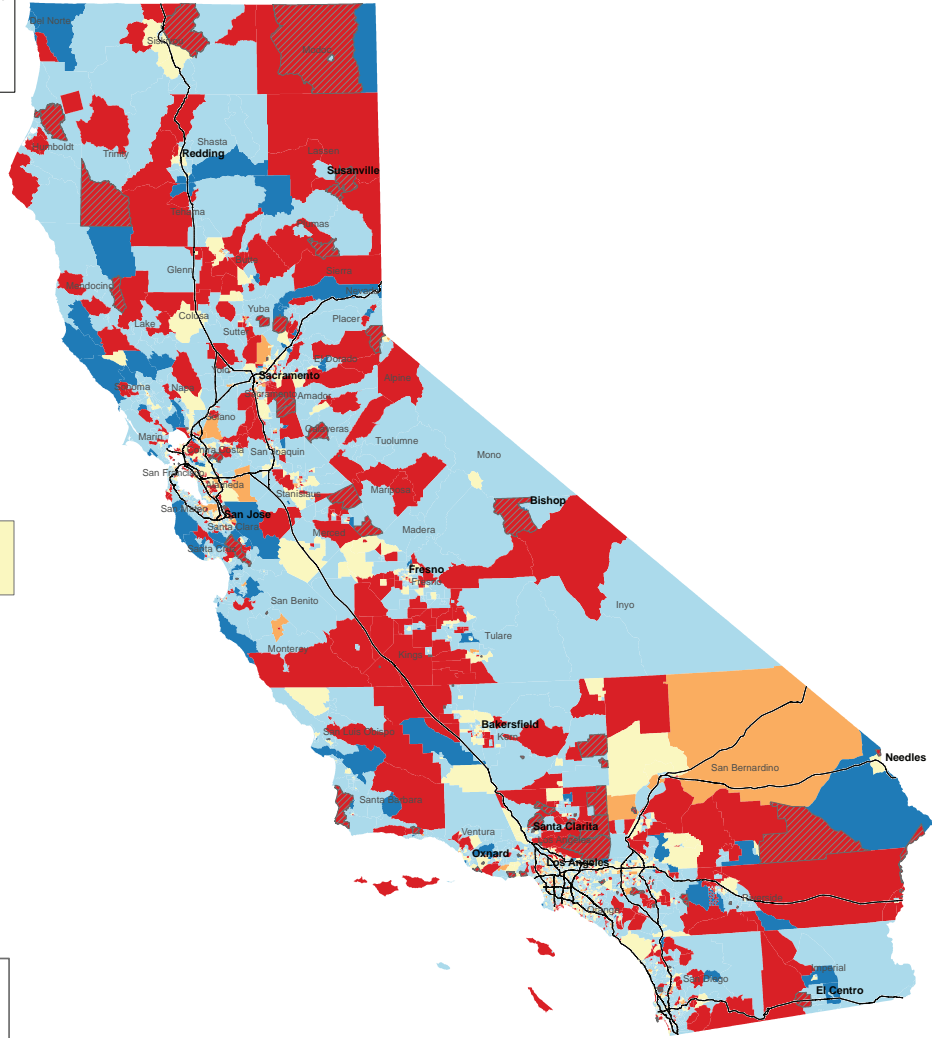
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2009  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

# California

## Modified Retail Food Environment Index According to Census Tract



National mRFEI Score = 10  
 California mRFEI Score = 11

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



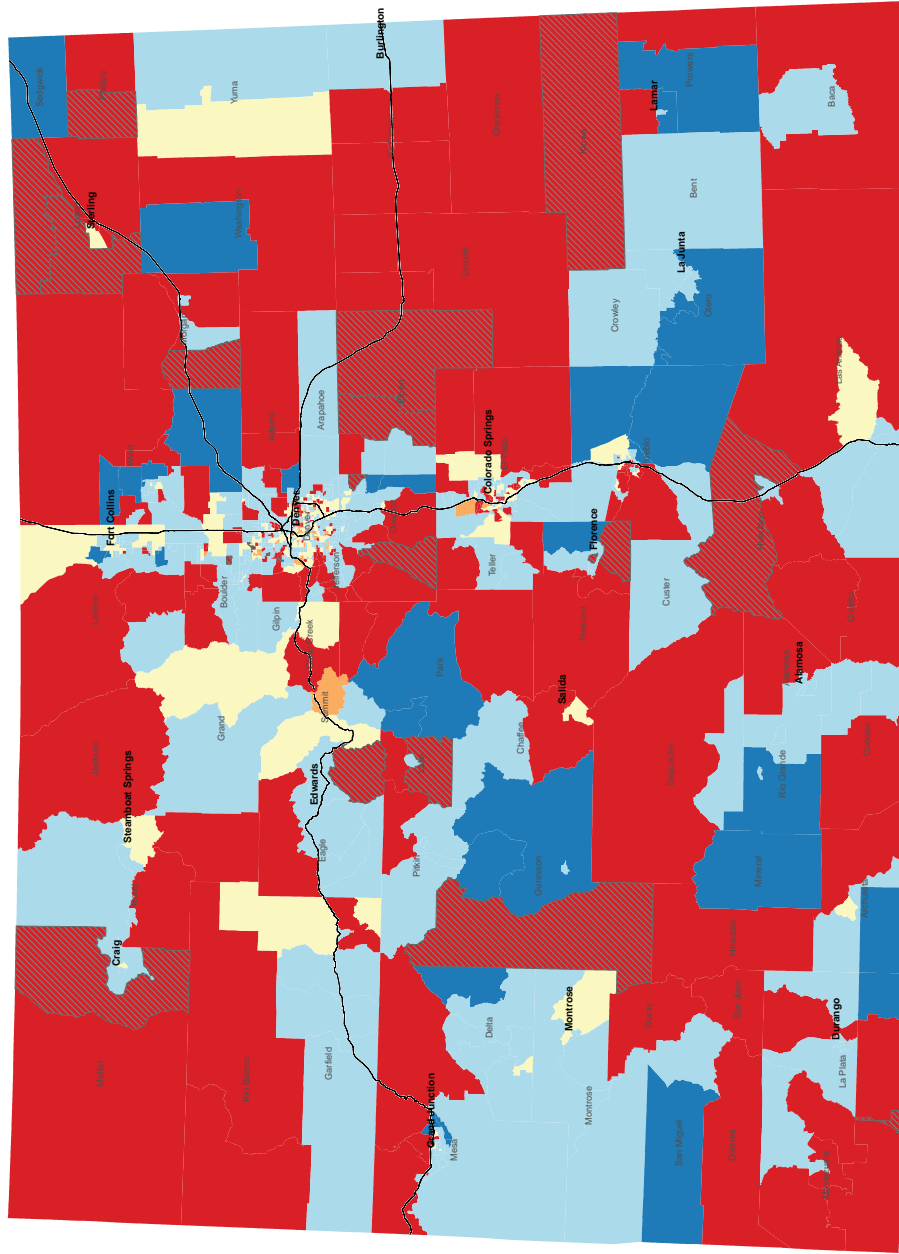
# Colorado

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, and fewer healthy food retailers. Areas with scores of 10 or less are shaded red, areas with scores of 11-37.5 are shaded yellow, and areas with scores of 38 or more are shaded blue. Lower scores indicate a higher density of healthy food retailers.

**Legend:**

- No retail food outlet (By U.S. Census Tract)
- No healthy food outlet
- 1-5
- 6-10
- 11-37.5
- 38-100
- Interstate Highways



National mRFEI Score = 10  
Colorado mRFEI Score = 11



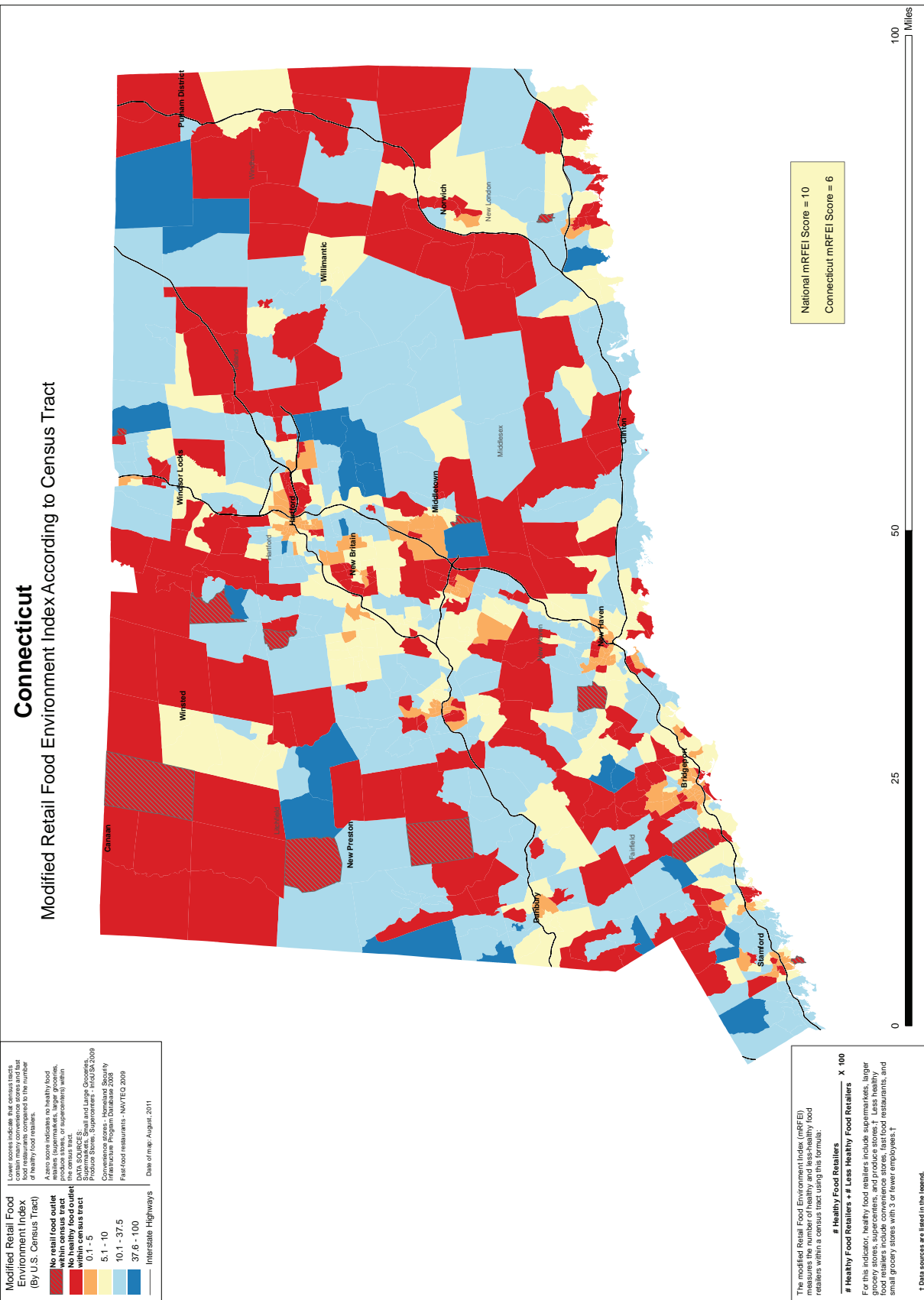
The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract, using this formula:

**# Healthy Food Retailers**  $\times$  100

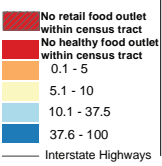
**# Healthy Food Retailers = # Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



**Modified Retail Food Environment Index (By U.S. Census Tract)**



Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

DATA SOURCES:  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA, 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

National mRFEI Score = 10  
 Delaware mRFEI Score = 12

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

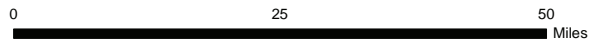
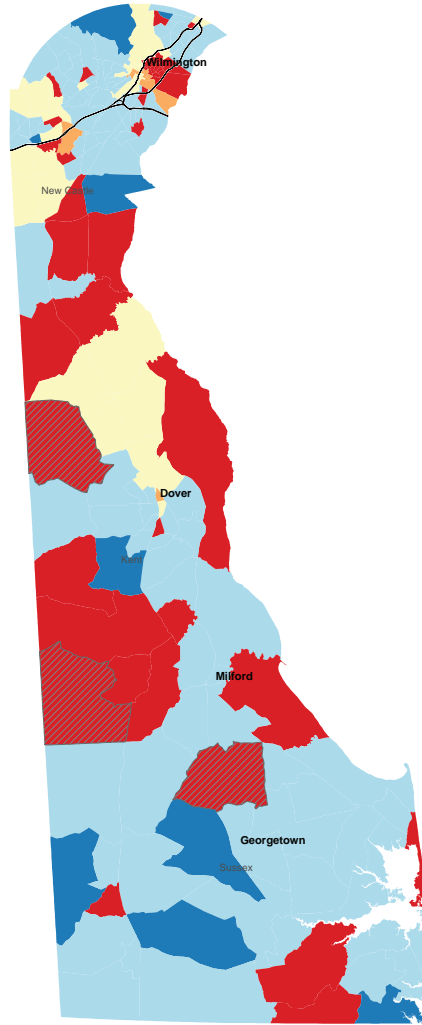
$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. ‡

† Data sources are listed in the legend.

## Delaware

### Modified Retail Food Environment Index According to Census Tract



**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

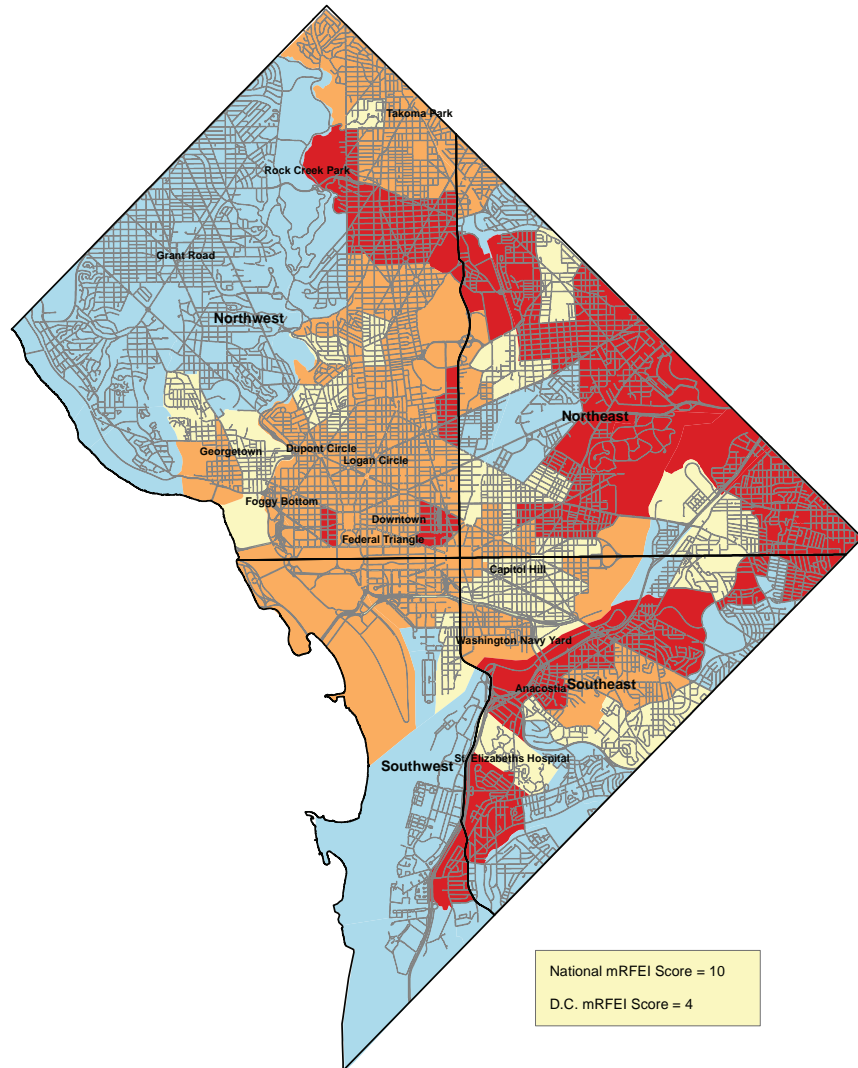
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## District of Columbia

### Modified Retail Food Environment Index According to Census Tract



National mRFEI Score = 10  
 D.C. mRFEI Score = 4

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. †

† Data sources are listed in the legend.

# Florida

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, but few to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger grocery stores, farmers markets) within the census tract.

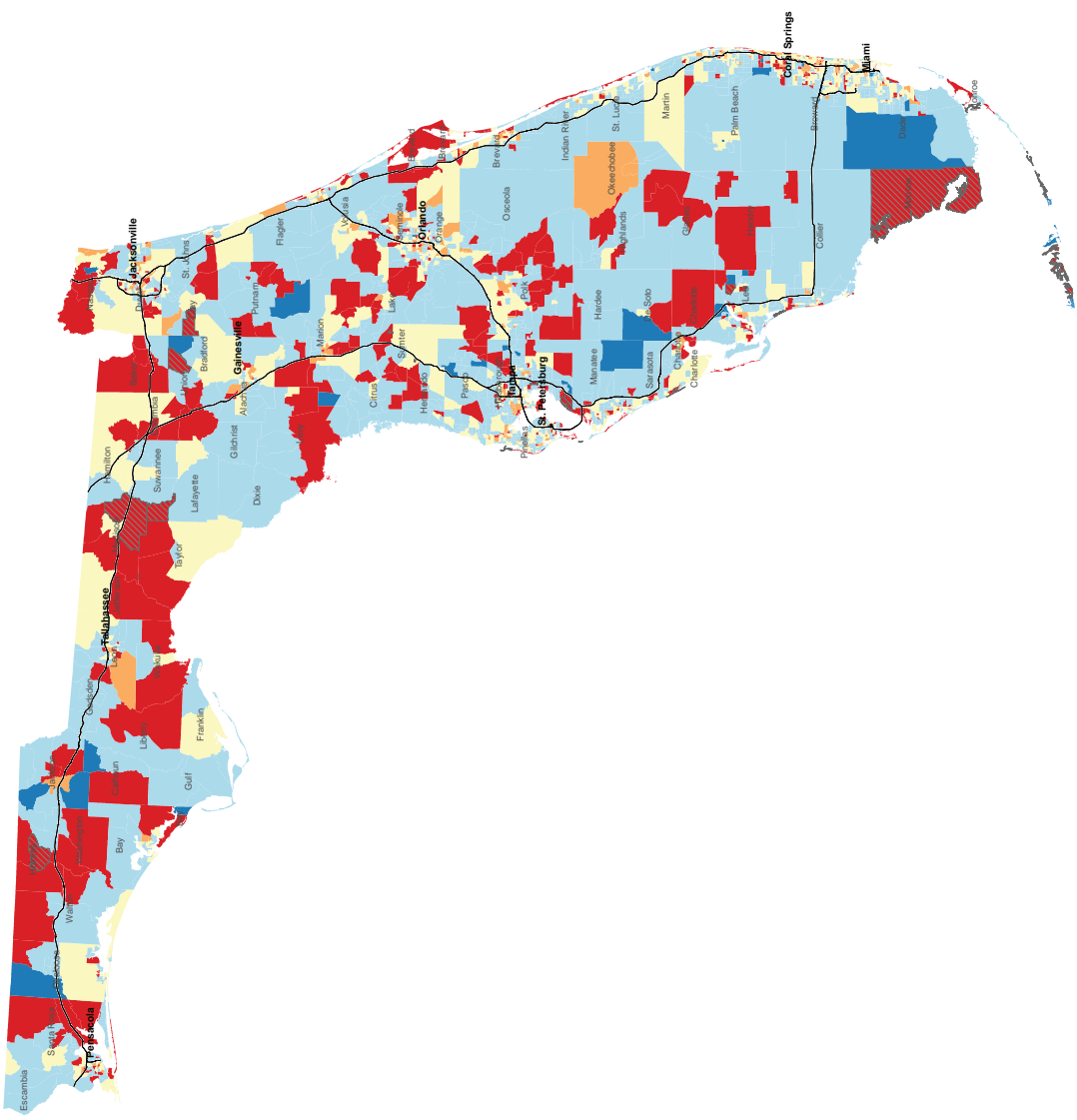
**DATA SOURCES:** Census 2000, Census 2000, Florida Statewide Food Retailer Survey, 2008

Convenience stores - Homeland Security Resource Program Database 2008

Fast-food restaurants - NUTRA 2008

Date of map: September, 2011

- No retail food outlet (By U.S. Census Tract)
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways



National mRFEI Score = 10  
 Florida mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers**  $\times$  100

**# Healthy Food Retailers + # Less Healthy Food Retailers**

For this index, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

# Georgia

## Modified Retail Food Environment Index According to Census Tract

### Modified Retail Food Environment Index (By U.S. Census Tract)

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

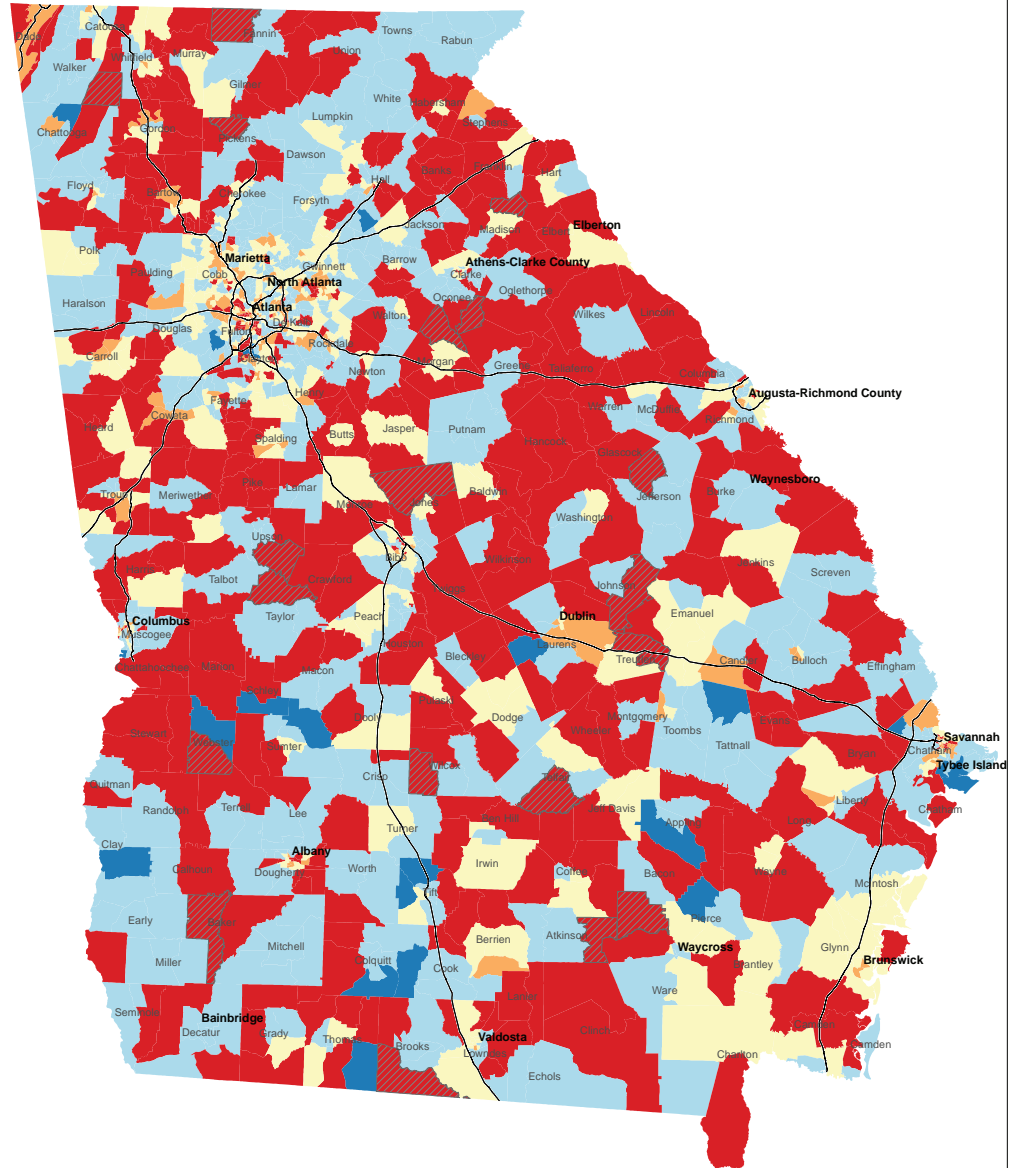
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

DATA SOURCES:  
Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009

Convenience stores - Homeland Security Infrastructure Program Database 2008  
Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

National mRFEI Score = 10  
Georgia mRFEI Score = 8



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. ‡

† Data sources are listed in the legend.



# Hawaii

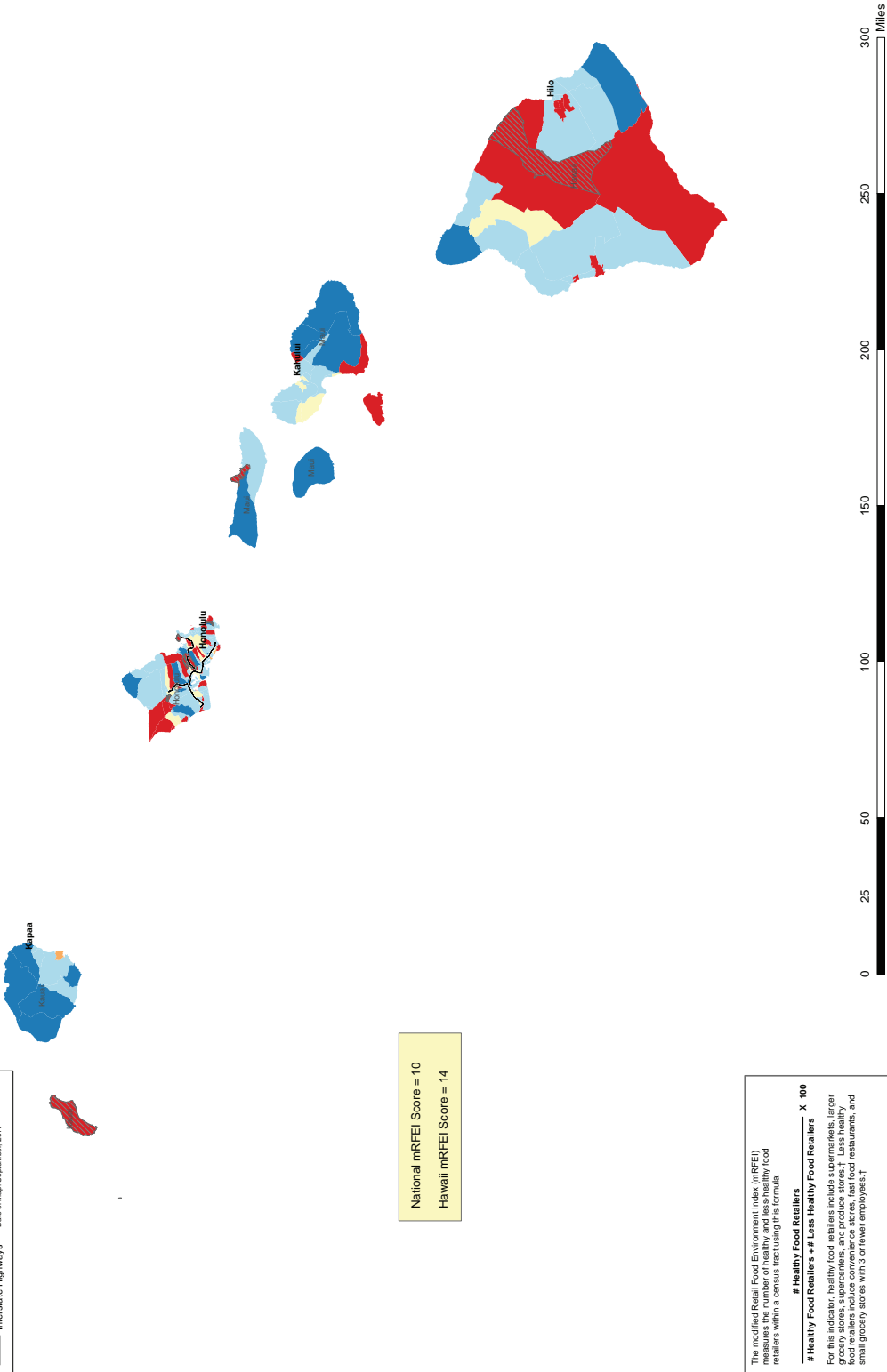
## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts have fewer healthy food retailers compared to the number of healthy food retailers.

A zero score indicates no healthy food outlets (grocery, convenience stores, fast food restaurants, Supercenters, Small and Large Groceries, Protein Shops, Supercenters - Includa 2009, Convenience Stores - Database 2009, Organic Produce - Database 2009, Fast food restaurants - NAVTEQ 2009).

Date of map: September, 2011

- Modified Retail Food Environment Index (By U.S. Census Tract)
- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways



National mRFEI Score = 10  
Hawaii mRFEI Score = 14

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, and convenience stores. Less-healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

National mRFEI Score = 10  
 Idaho mRFEI Score = 13

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

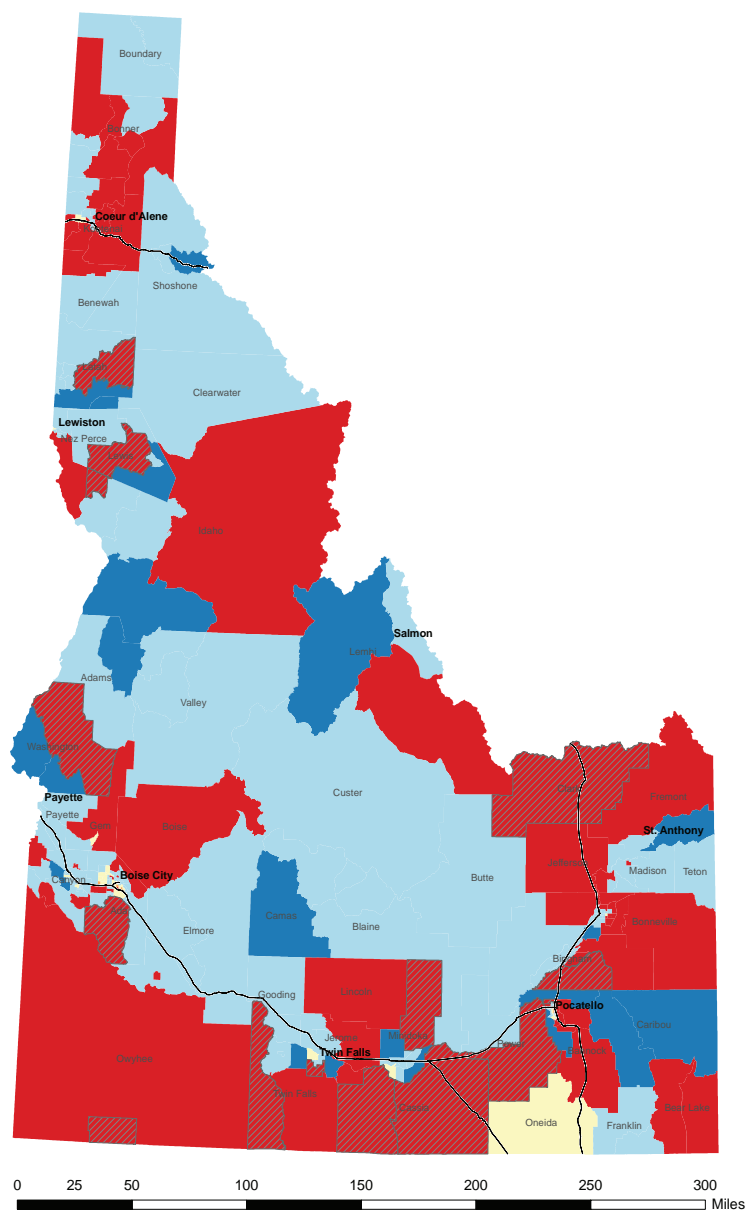
$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. †

† Data sources are listed in the legend.

# Idaho

## Modified Retail Food Environment Index According to Census Tract





**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

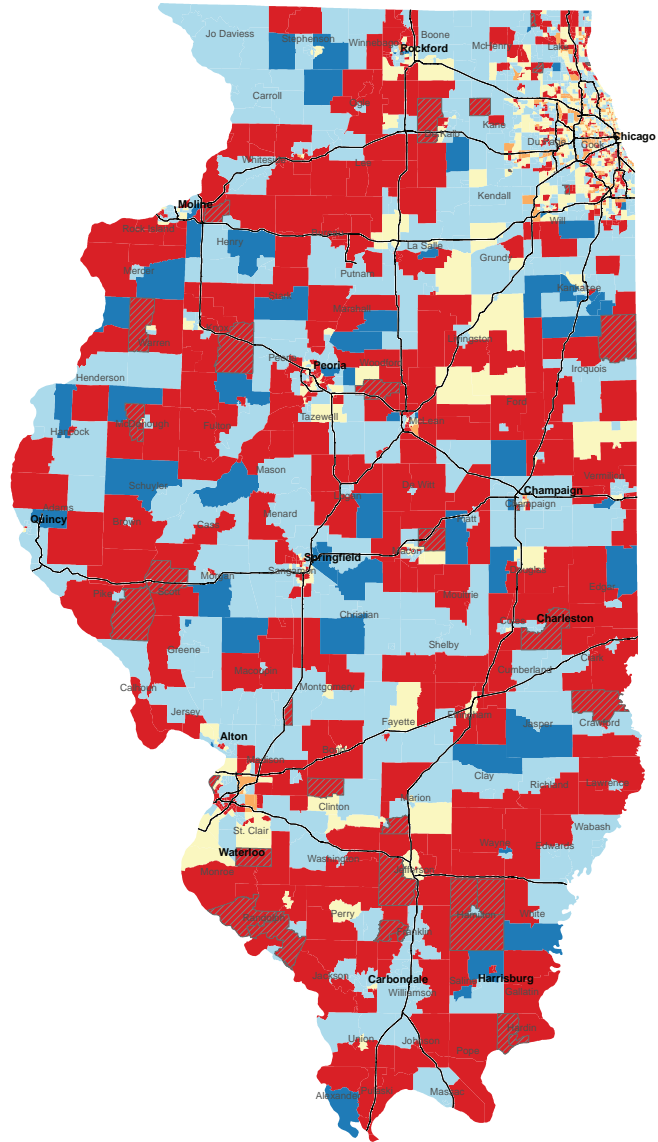
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## Illinois

### Modified Retail Food Environment Index According to Census Tract



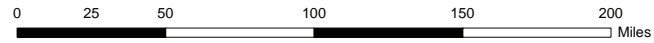
National mRFEI Score = 10  
 Illinois mRFEI Score = 8

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

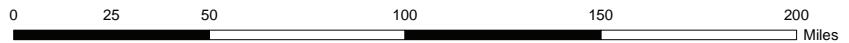
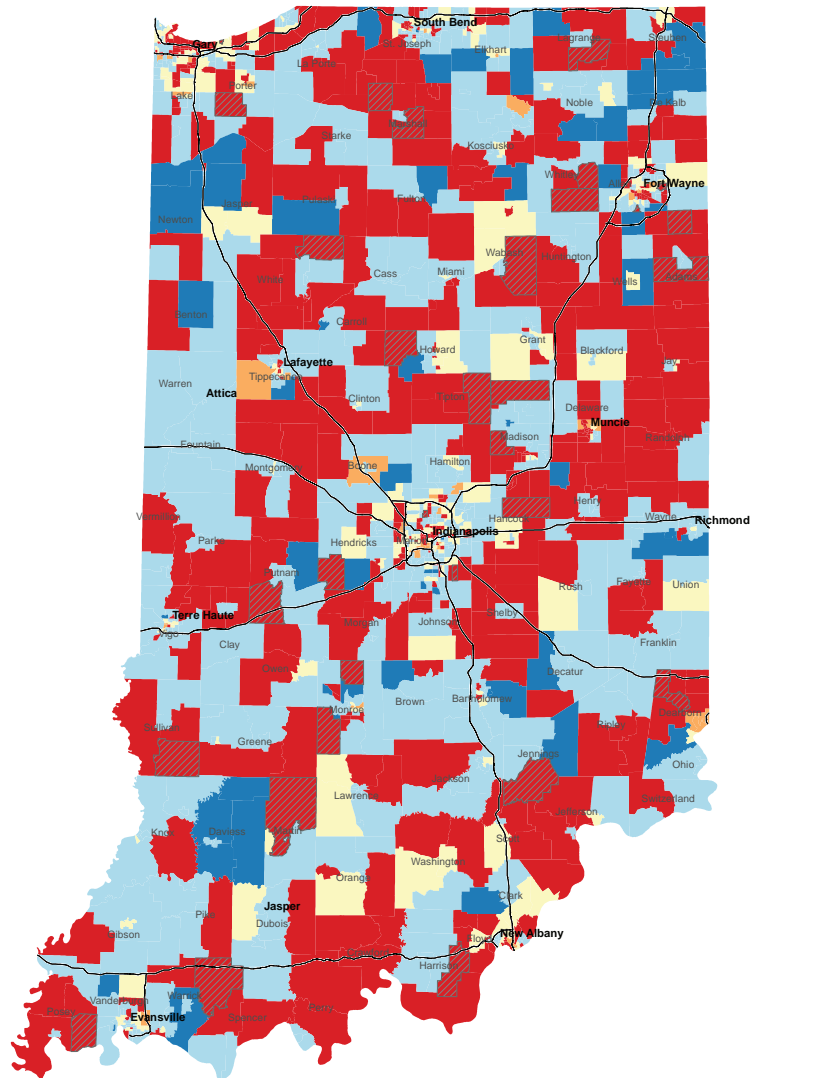
Date of map: August, 2011

Interstate Highways

National mRFEI Score = 10  
 Indiana mRFEI Score = 10

# Indiana

## Modified Retail Food Environment Index According to Census Tract



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.‡

† Data sources are listed in the legend.

# Iowa

## Modified Retail Food Environment Index According to Census Tract

Low scores indicate that census tracts have a low density of healthy food retailers. A zero score indicates no healthy food retailers, compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers, compared to the number of healthy food retailers.

**No retail food outlets within census tract** (Dark Red)

**No healthy food outlets within census tract** (Red)

0.1 - 5 (Light Red)

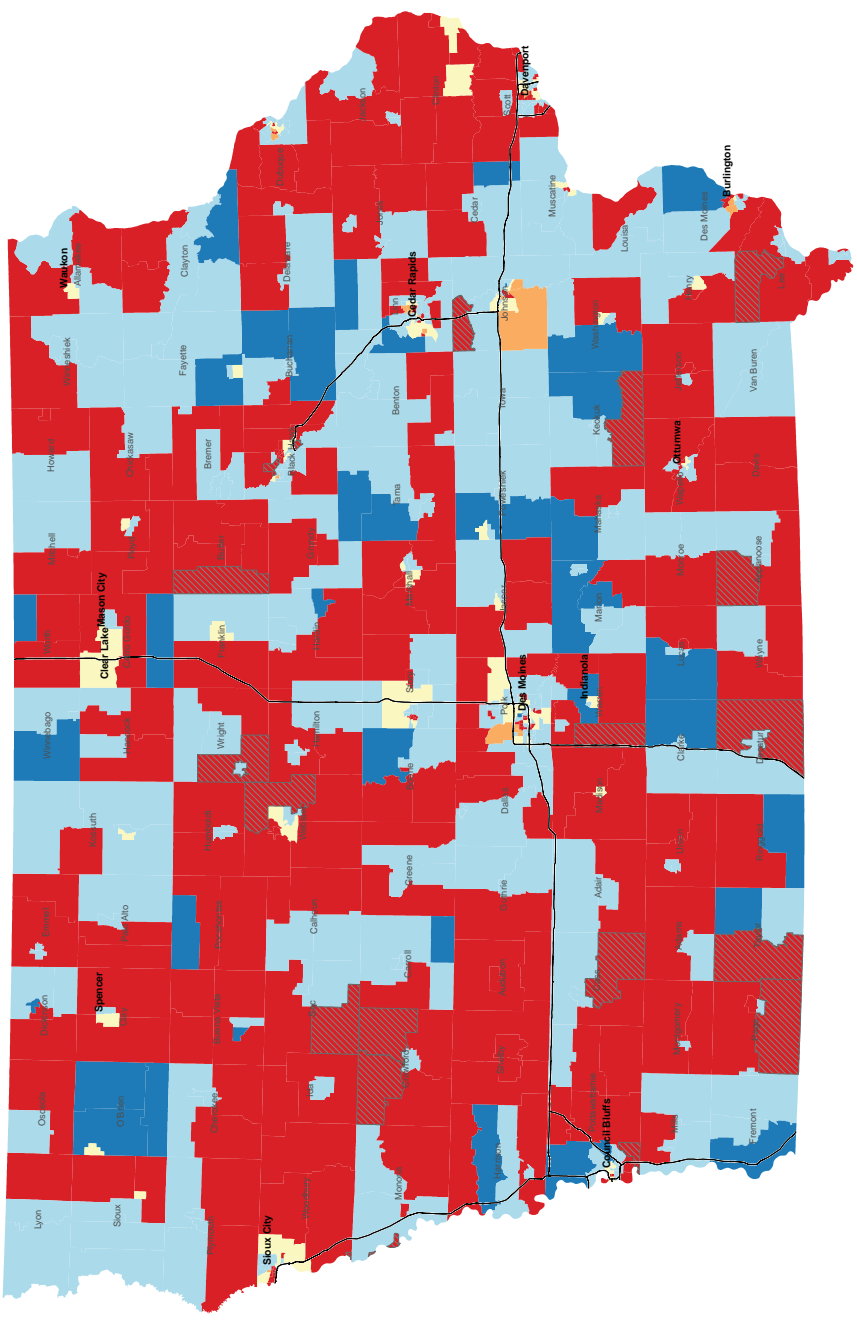
5.1 - 10 (Orange)

10.1 - 37.5 (Yellow)

37.6 - 100 (Light Blue)

Interstate Highways (Blue line)

Date of map: September, 2011



National mRFEI Score = 10  
Iowa mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers** x 100

**# Healthy Food Retailers** + **# Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger food retailers, and convenience stores. Less-healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

# Kansas

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (by U.S. Census Tract)**

Lower scores indicate healthier food environments with fewer fast-food restaurants compared to the number of healthy food retailers.

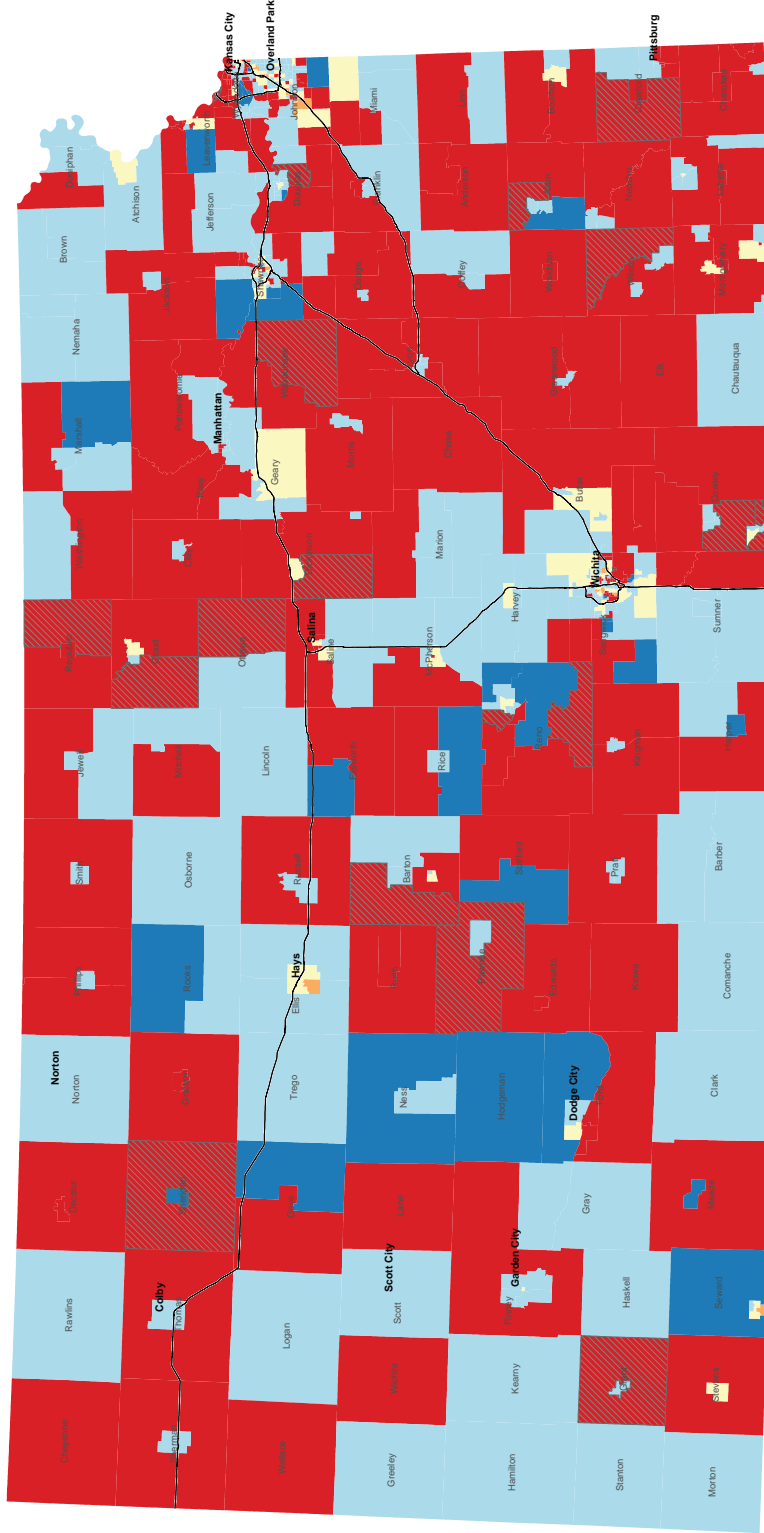
A zero score indicates no healthy food retailers, no fast-food restaurants, no produce stores, or supermarkets within the census tract.

Legend:

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Interstate Highways

Date of map: September, 2011



National mRFEI Score = 10  
 Kansas mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}}{100}$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, and farmers markets. Less-healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



# Kentucky

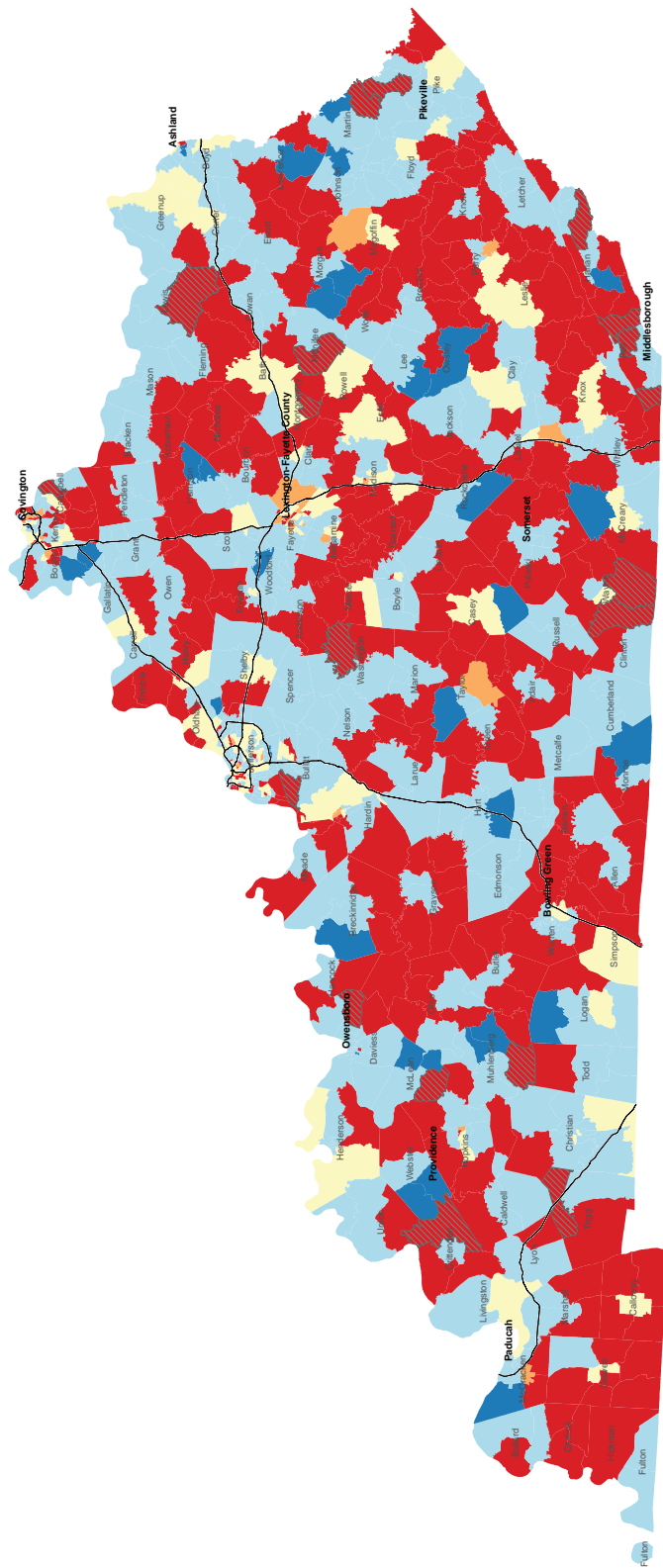
## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants, and fewer supermarkets and full-service grocery stores. A zero score indicates no healthy food retailers (supermarkets, larger grocers, produce stores, supermarkets) within the census tract.

**DATA SOURCES:**  
 Convenience stores - National Security Infrastructure Program Database 2008  
 Fast-food restaurants - NUTREK 2009

Date of map: August, 2011

- No retail food outlet (By U.S. Census Tract)
  - No healthy food outlet
  - 0.1 - 5
  - 5.1 - 10
  - 10.1 - 37.5
  - 37.6 - 100
- Interstate Highways



National mRFEI Score = 10  
 Kentucky mRFEI Score = 10



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using the formula:

**# Healthy Food Retailers**  $\times$  100  
**# Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



# Maine

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food outlets (supermarkets, larger grocery stores, supercenters, or supercenters) within the census tract.

**No retail food outlet within census tract** (Dark Red)

**No healthy food outlet within census tract** (Red)

**0.1 - 5** (Orange)

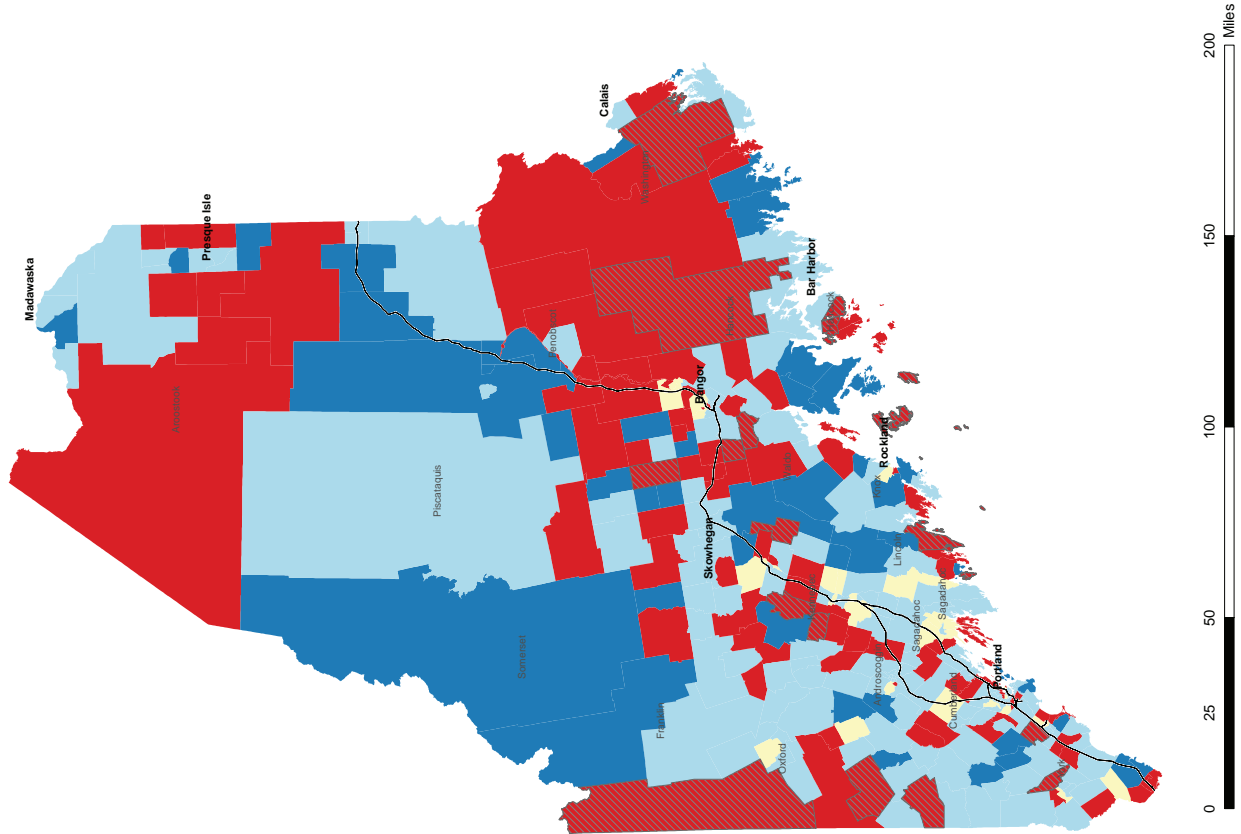
**5.1 - 10** (Yellow)

**10.1 - 37.5** (Light Blue)

**37.6 - 100** (Dark Blue)

Interstate Highways

Date of map: September, 2011



National mRFEI Score = 10  
Maine mRFEI Score = 15

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers** X 100  
**# Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



# Maryland

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, and fewer healthy food retailers.

A trapezoidal score indicates the number of healthy food retailers.

**No retail food outlet within census tract**

**0.1 - 0.5**

**0.6 - 1.0**

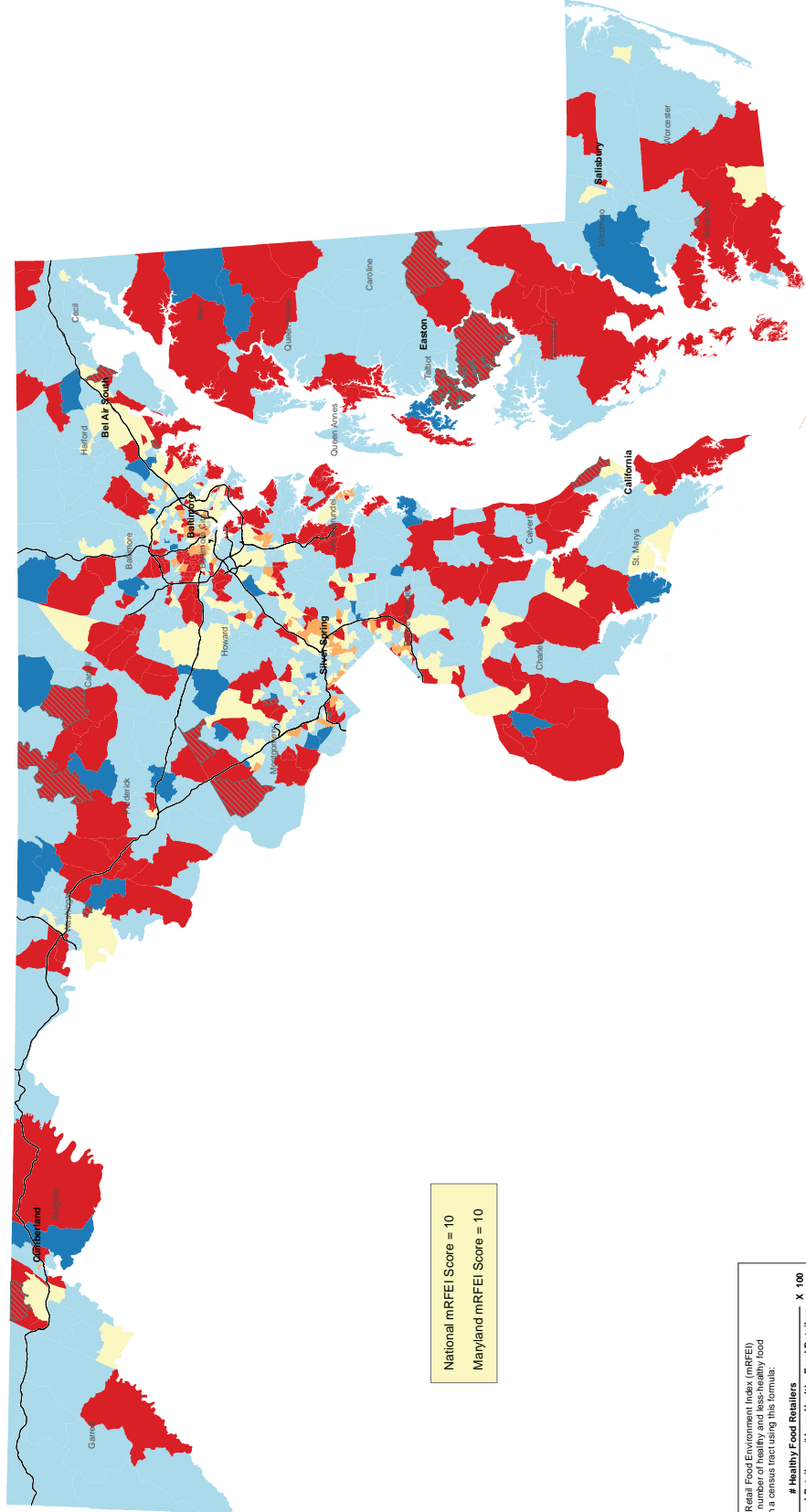
**1.1 - 37.5**

**37.6 - 100**

Interstate Highways

DATA SOURCES: National Center for Health Statistics, Behavioral Risk Factor Surveillance System, 2009; Census Bureau, Superstore<sup>†</sup> (ACS, 2009); Convenience stores - Nonalcohol Security Infrastructure Program Database 2008; Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011



National mRFEI Score = 10  
 Maryland mRFEI Score = 10



The modified Retail Food Environment Index (mRFEI) is a measure of the availability of healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers X 100**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.<sup>†</sup> Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.



# Massachusetts

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts have fewer healthy food outlets and fewer fast-food restaurants compared to the number of healthy food outlets.

A zero score indicates no healthy food outlets (grocery stores, produce stores, or supermarkets) within the census tract.

**No retail food outlet within census tract** (Red)

**No healthy food outlet within census tract** (Dark Red)

**0.1 - 5** (Orange)

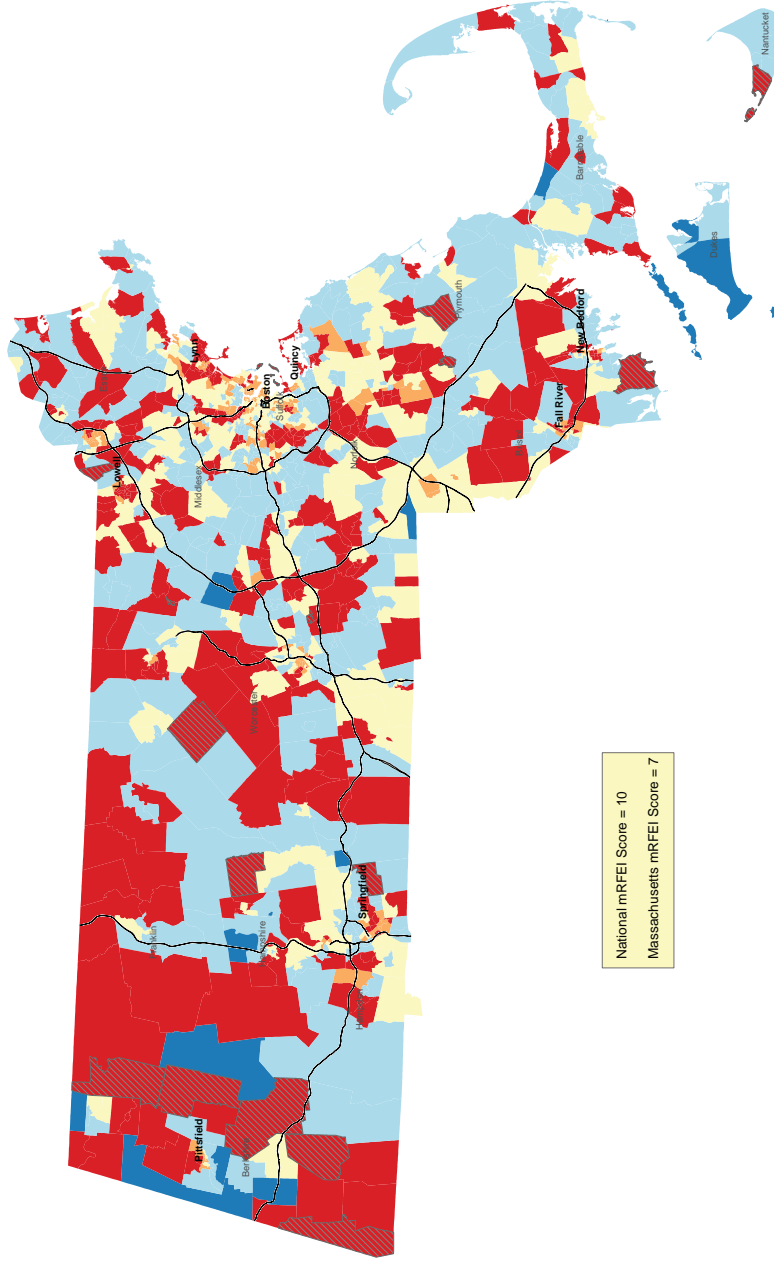
**5.1 - 10** (Yellow)

**10.1 - 37.5** (Light Blue)

**37.6 - 100** (Dark Blue)

— Interstate Highways

Date of map: August, 2011



National mRFEI Score = 10  
Massachusetts mRFEI Score = 7

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and "more or less" Less healthy food retailers. Supercenters and supercenters are defined as small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.

# Michigan

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants and few healthy food retailers.

A zero score indicates no healthy food retailers, convenience stores, or supermarkets within the census tract.

**DATA SOURCES:** Small and Large Groceries, Produce Stores, Supercenters - INFOUSA 2009; Convenience stores - Homeland Security Infrastructure Program Database 2008; Fast-food restaurants - NAVTEG 2009

Date of map: September, 2011

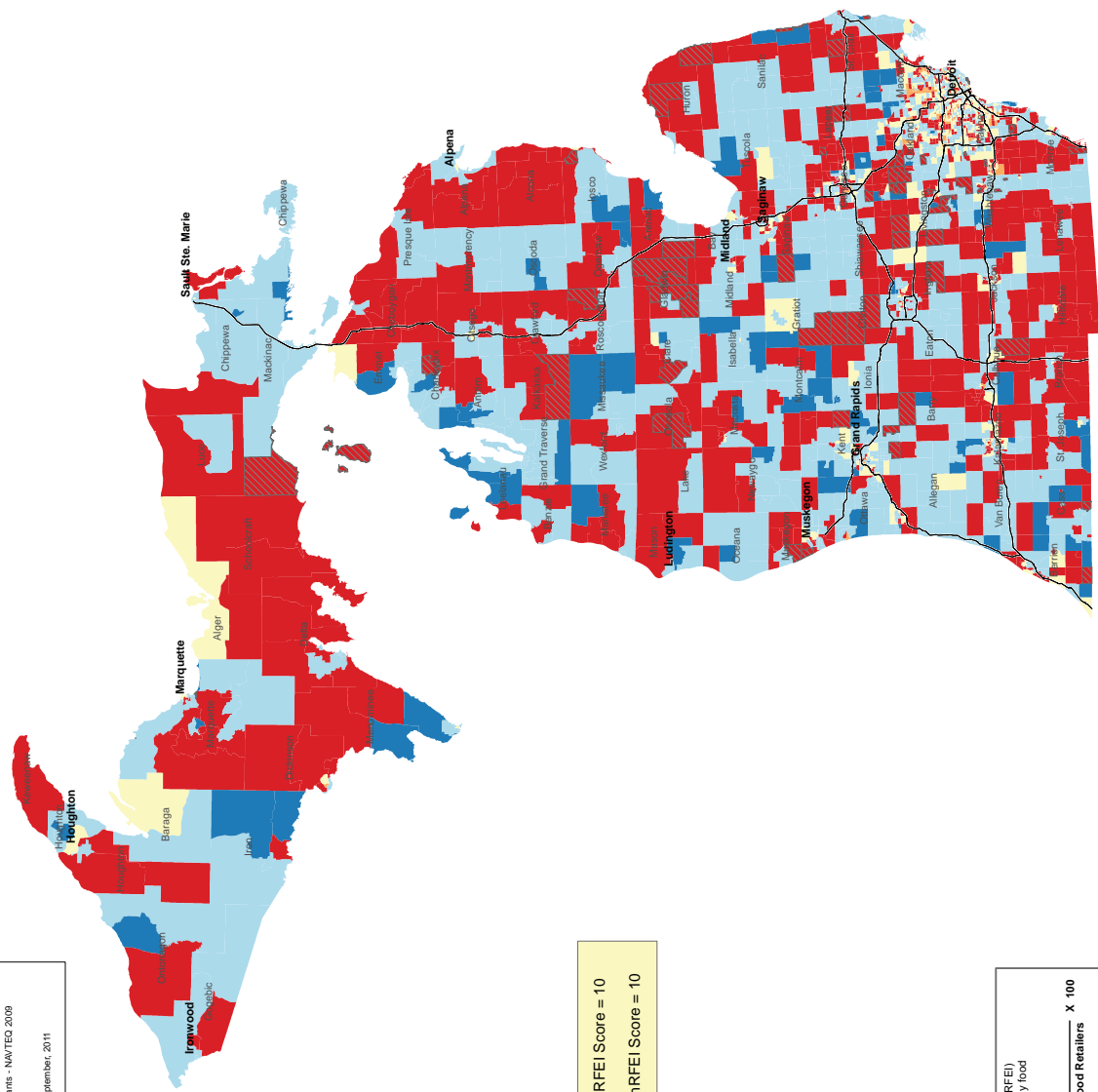
Interstate Highways

**0.1 - 5**  
No retail food outlet within census tract

**5.1 - 10**  
No healthy food outlet within census tract

**10.1 - 37.5**  
Convenience stores, Supercenters, and produce stores

**37.6 - 100**  
Convenience stores, Supercenters, and produce stores; fast food restaurants, and small grocery stores with 3 or fewer employees.



National mRFEI Score = 10  
Michigan mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers** X 100  
**# Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. †

† Data sources are listed in the legend.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

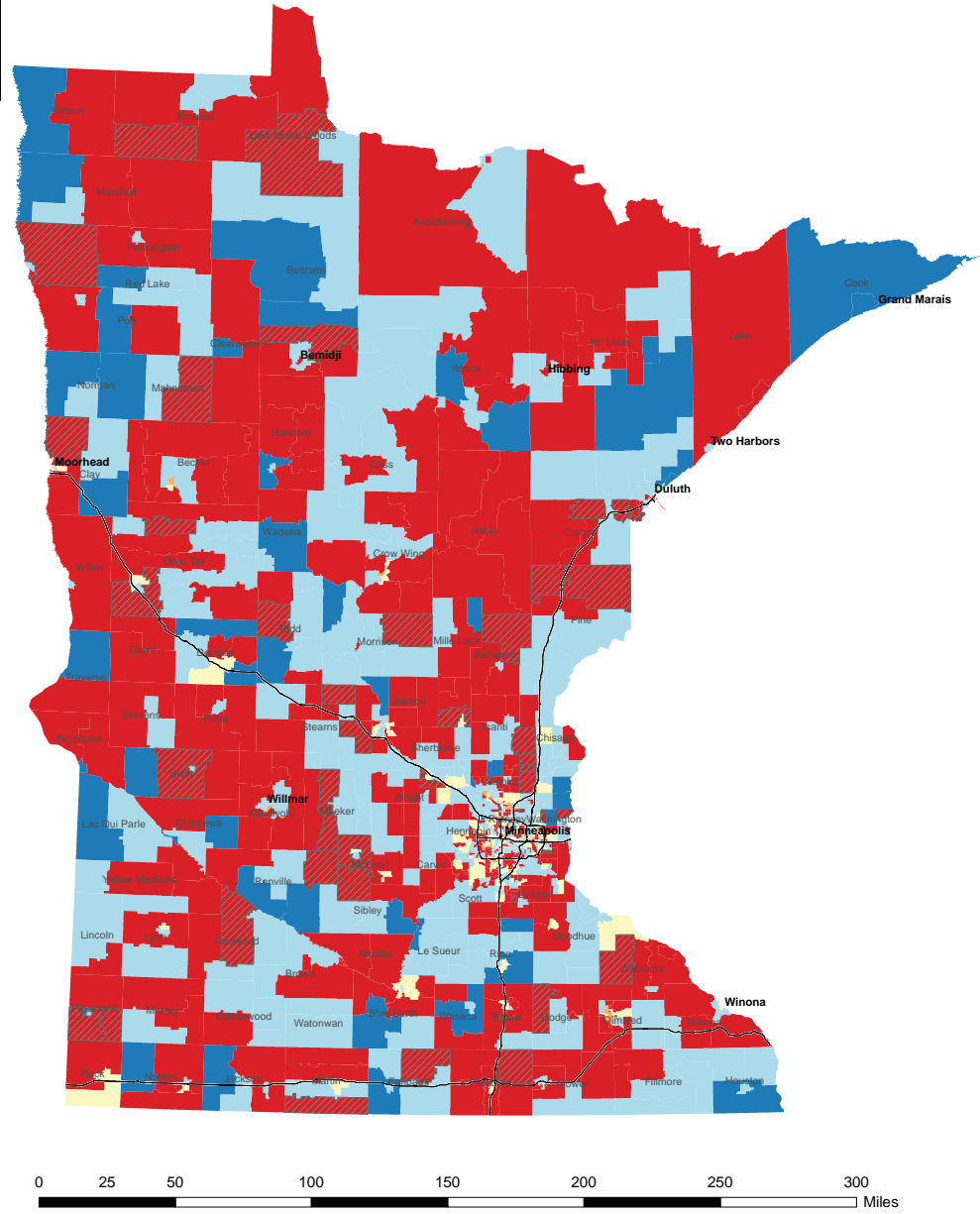
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

# Minnesota

## Modified Retail Food Environment Index According to Census Tract



National mRFEI Score = 10  
 Minnesota mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

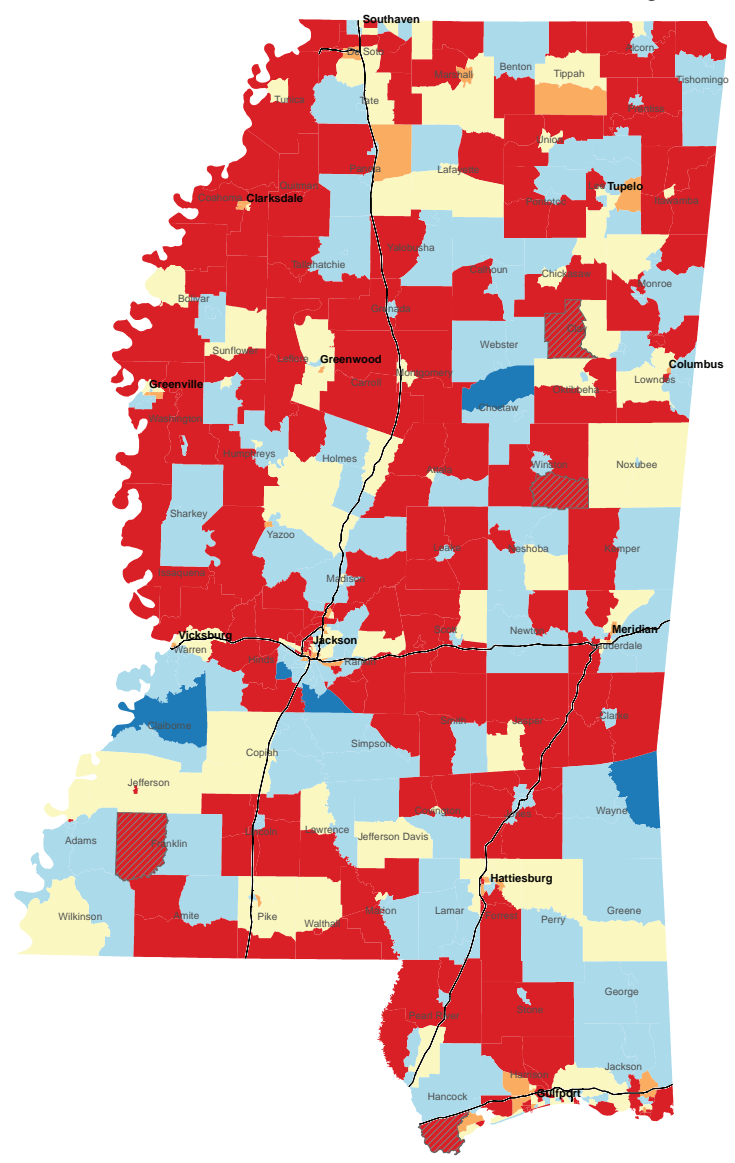
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## Mississippi

### Modified Retail Food Environment Index According to Census Tract



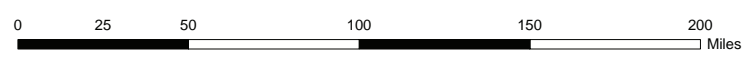
National mRFEI Score = 10  
 Mississippi mRFEI Score = 8

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. ‡

† Data sources are listed in the legend.



# Missouri

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, and are less conducive to the number of healthy food outlets.

A score of 0 indicates no healthy food retailers (supermarkets, larger grocery stores, produce stores, or supermarkets) within the census tract.

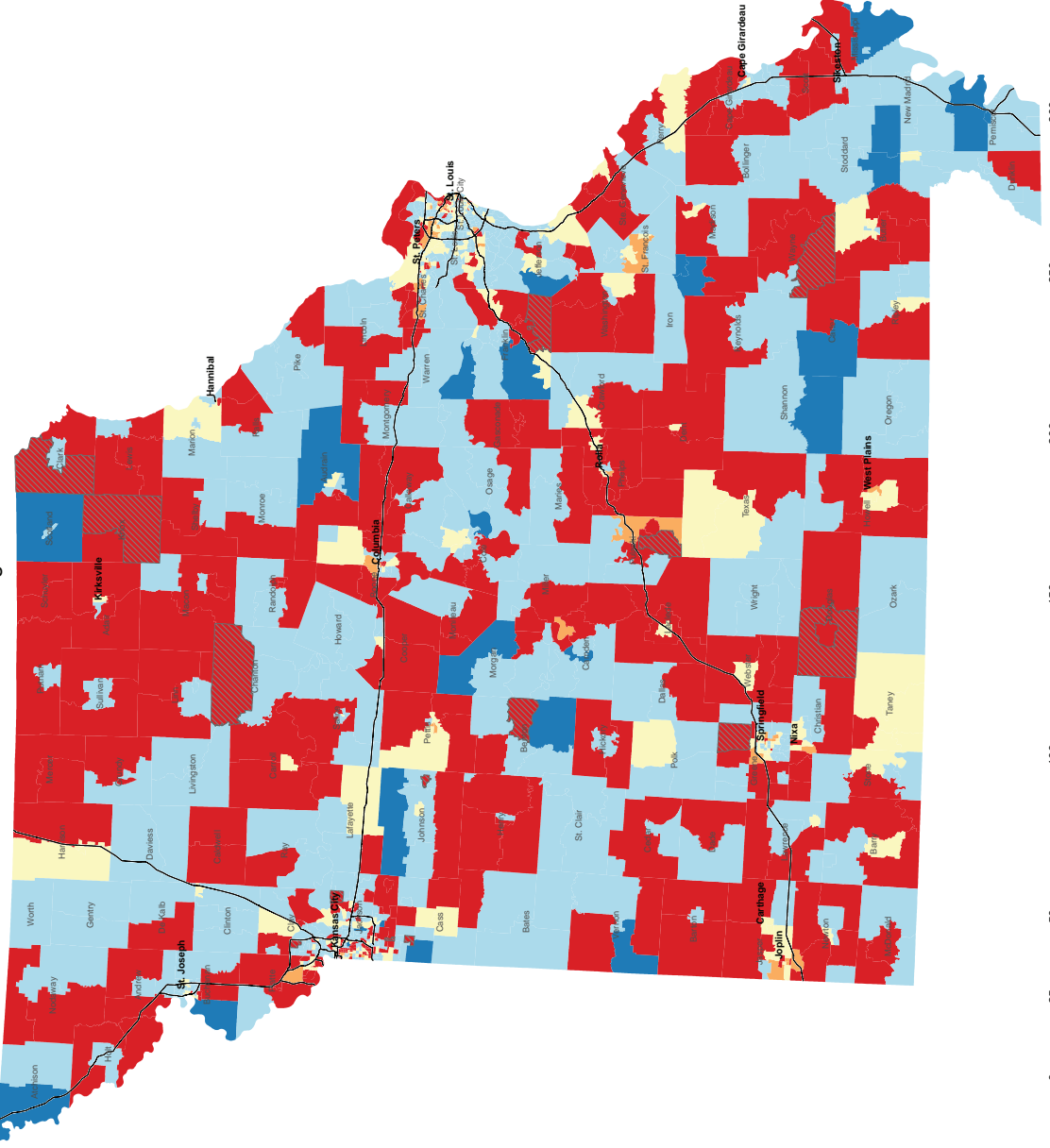
**DATA SOURCES:**  
 Supermarket Stores - USDA and USDA, 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2009  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- 0 - No retail food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Interstate Highways



National mRFEI Score = 10  
 Missouri mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using the formula:

**# Healthy Food Retailers X 100**  
**# Healthy Food Retailers + # Less Healthy Food Retailers**

For this indicator, healthy food outlets include supermarkets, larger grocery stores, supermarkets and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. †

† Data sources are listed in the legend.

# Montana

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

Lowest scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers within the census tract.

A zero score indicates no healthy food produce stores, or supermarkets) within the census tract.

**No healthy food outlet within census tract**

**1** - 1 to 5

**2** - 6 to 10

**3** - 11 to 15

**4** - 16 to 20

**5** - 21 to 25

**6** - 26 to 30

**7** - 31 to 35

**8** - 36 to 40

**9** - 41 to 45

**10** - 46 to 50

**11** - 51 to 55

**12** - 56 to 60

**13** - 61 to 65

**14** - 66 to 70

**15** - 71 to 75

**16** - 76 to 80

**17** - 81 to 85

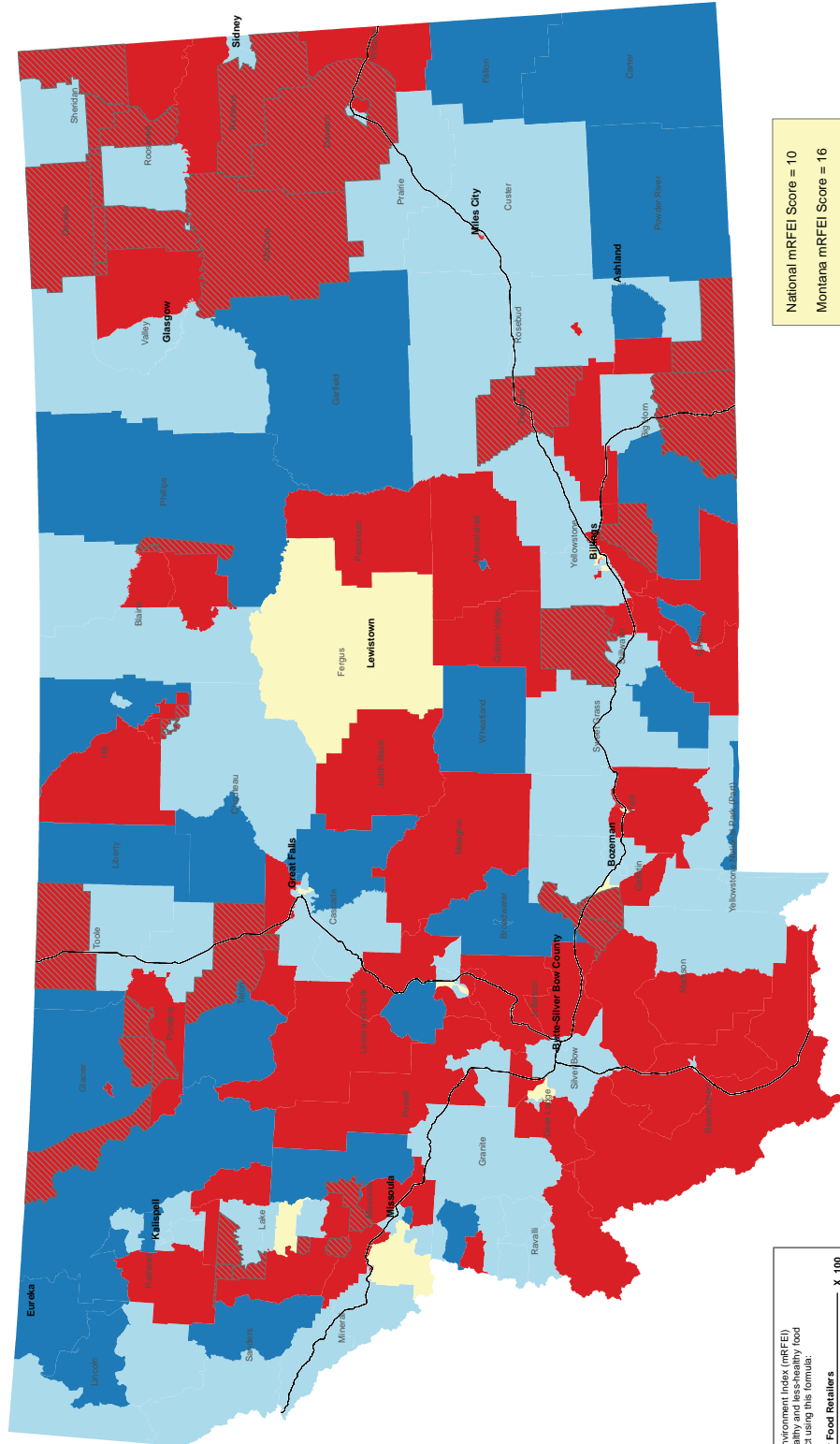
**18** - 86 to 90

**19** - 91 to 95

**20** - 96 to 100

Interstate Highways

Date of map: September, 2011



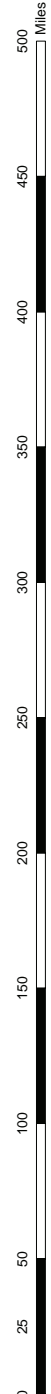
National mRFEI Score = 10  
 Montana mRFEI Score = 16

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers** x 100  
**# Healthy Food Retailers + # Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supermarkets, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



# Nebraska

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (BY U.S. Census Tract)**

Lower scores indicate that census tracts contain more convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (convenience stores, fast food, produce stores, or supermarkets) within the census tract.

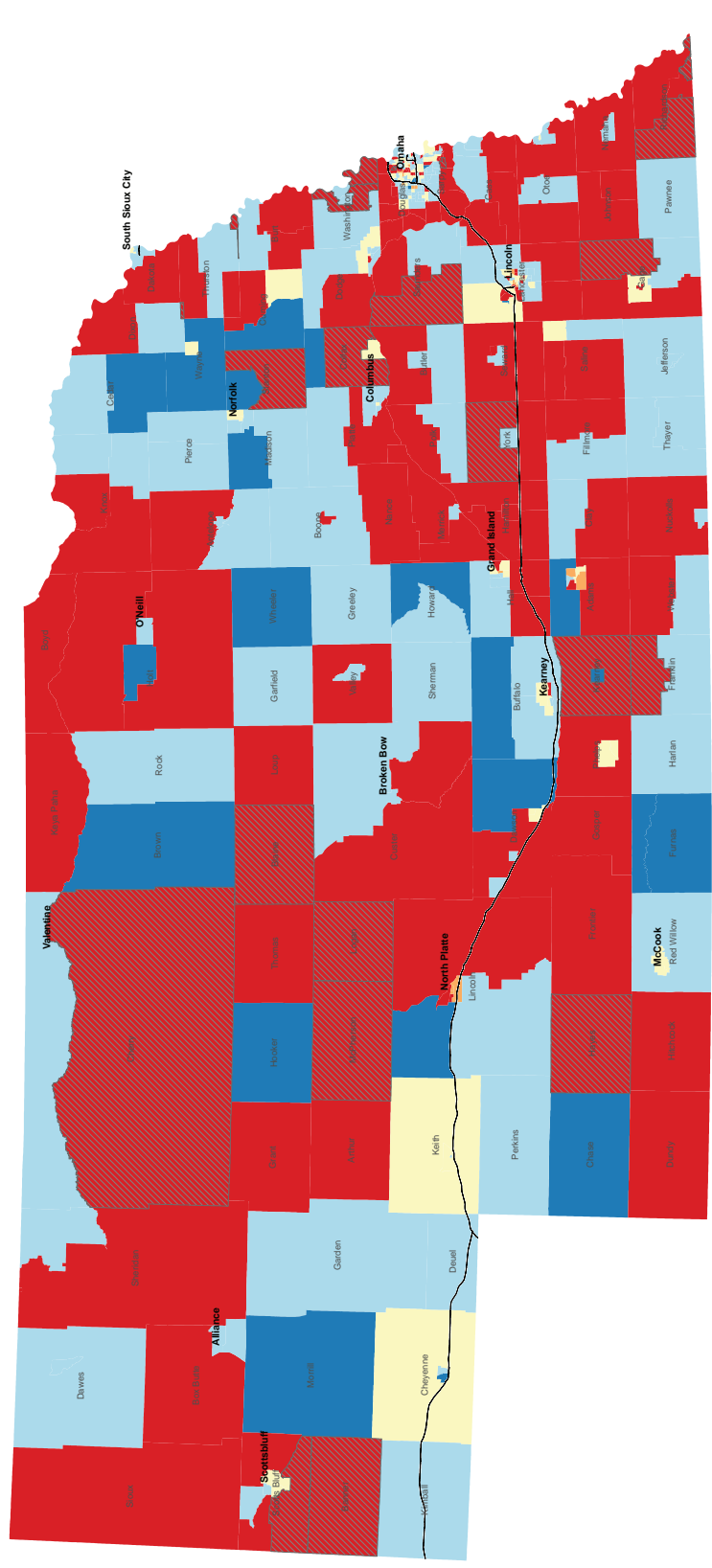
**No retail food outlet within census tract**

**No healthy food outlet within census tract**

0.1 - 5  
5.1 - 10  
10.1 - 37.5  
37.6 - 100

Interstate Highways

Date of map: September, 2011



National mRFEI Score = 10  
Nebraska mRFEI Score = 10



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census including this formula:

$$\frac{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}}{\# \text{ Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supermarkets, and produce stores. Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

— Interstate Highways

National mRFEI Score = 10  
 Nevada mRFEI Score = 11

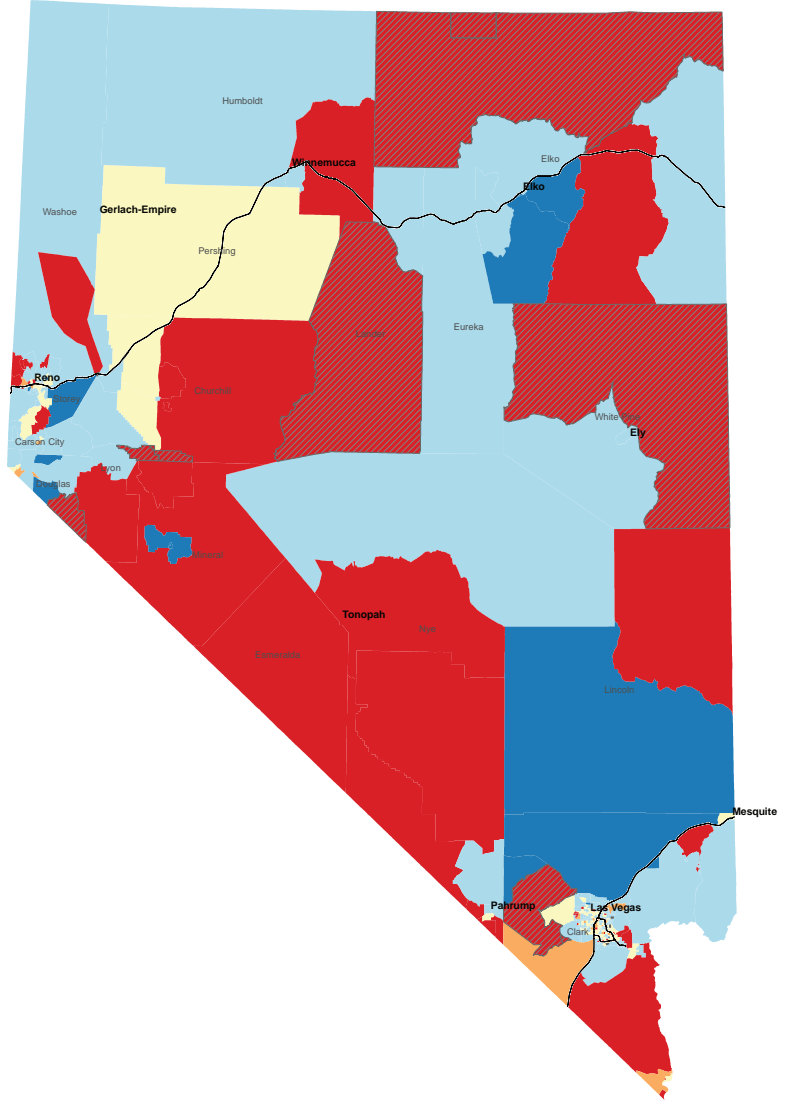
The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

**Nevada**  
 Modified Retail Food Environment Index According to Census Tract





**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

— Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

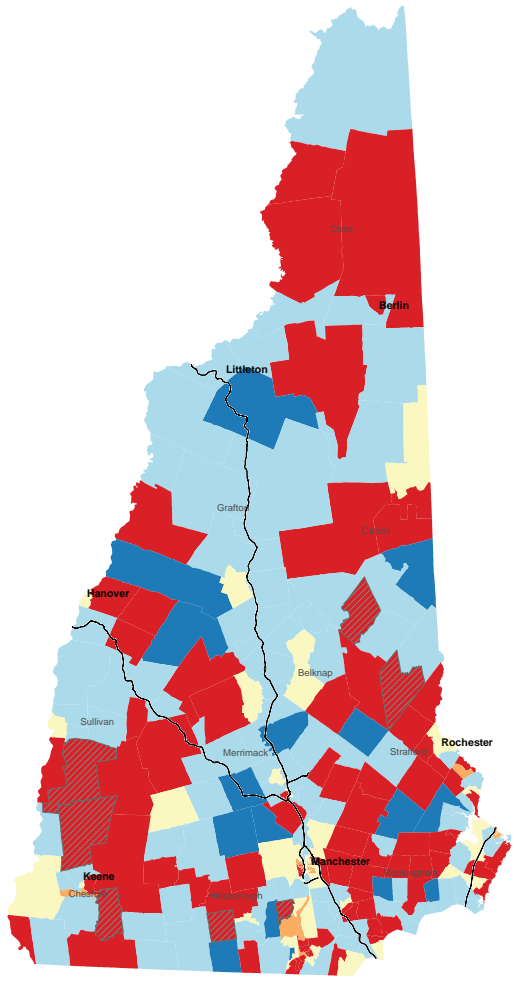
**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2006  
 Fast-food restaurants - NAVTEQ 2009

Date of map: August, 2011

## New Hampshire

### Modified Retail Food Environment Index According to Census Tract

National mRFEI Score = 10  
 New Hampshire mRFEI Score = 9



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.‡

† Data sources are listed in the legend.



**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

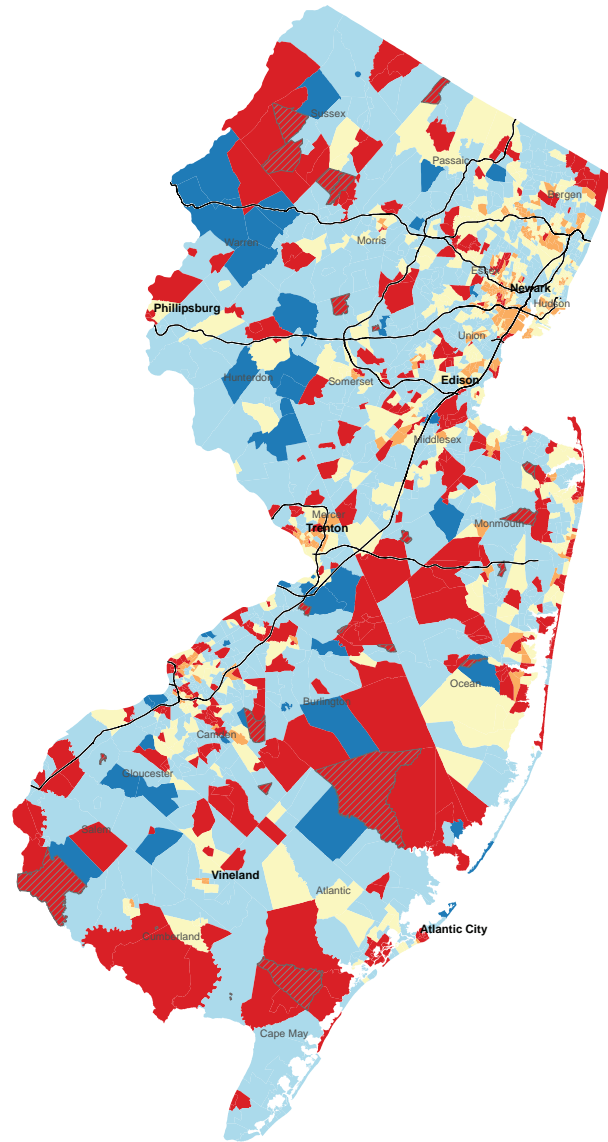
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2009  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## New Jersey

### Modified Retail Food Environment Index According to Census Tract



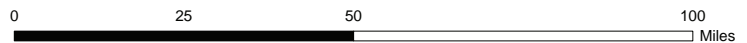
National mRFEI Score = 10  
 New Jersey mRFEI Score = 8

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.‡

† Data sources are listed in the legend.



**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

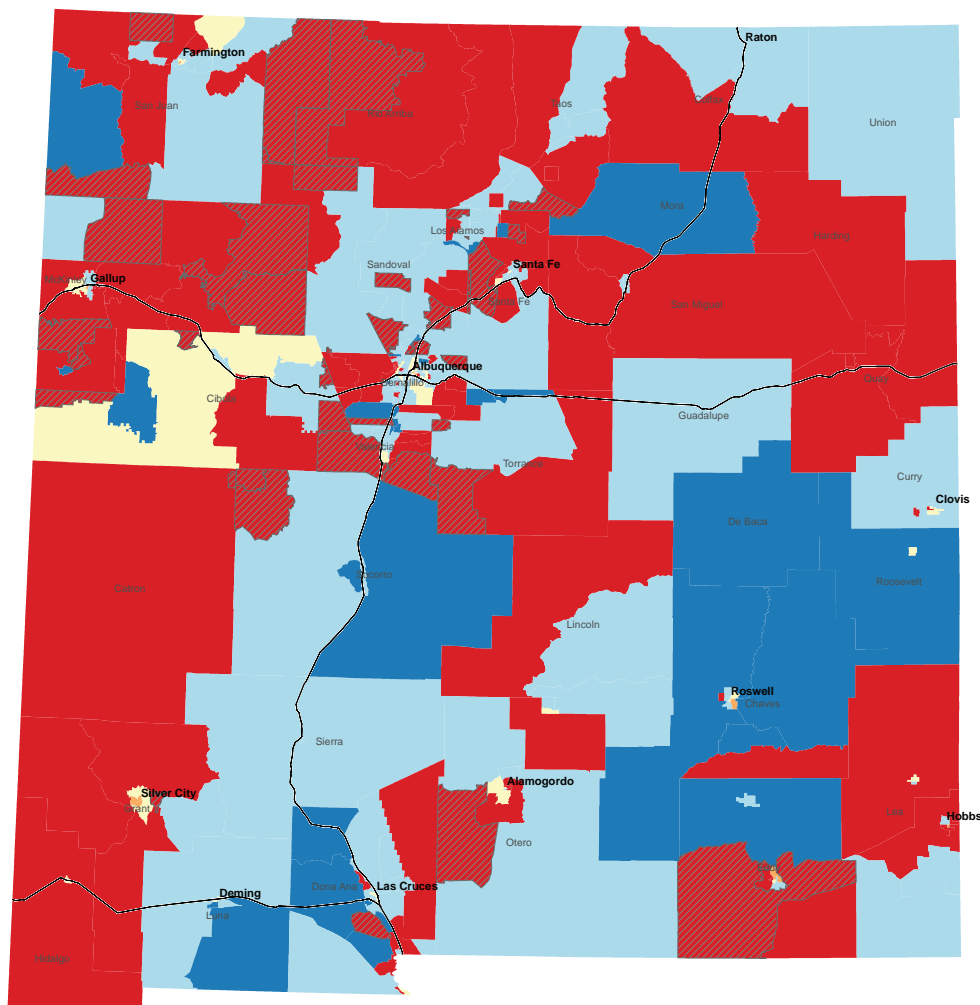
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

DATA SOURCES:  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## New Mexico

### Modified Retail Food Environment Index According to Census Tract



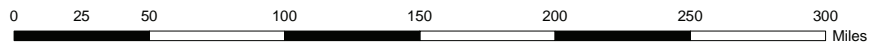
The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

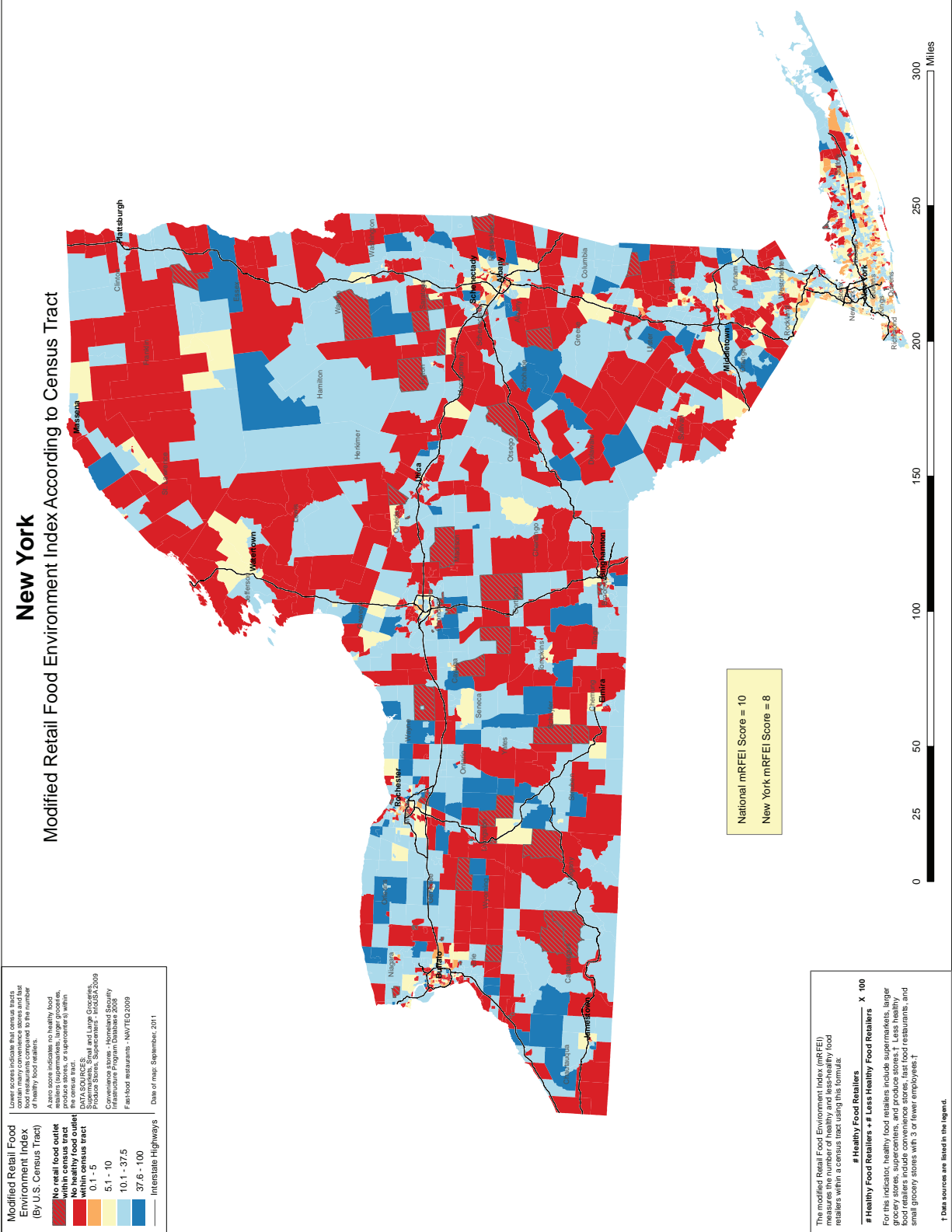
$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

National mRFEI Score = 10  
 New Mexico mRFEI Score = 12





# North Carolina

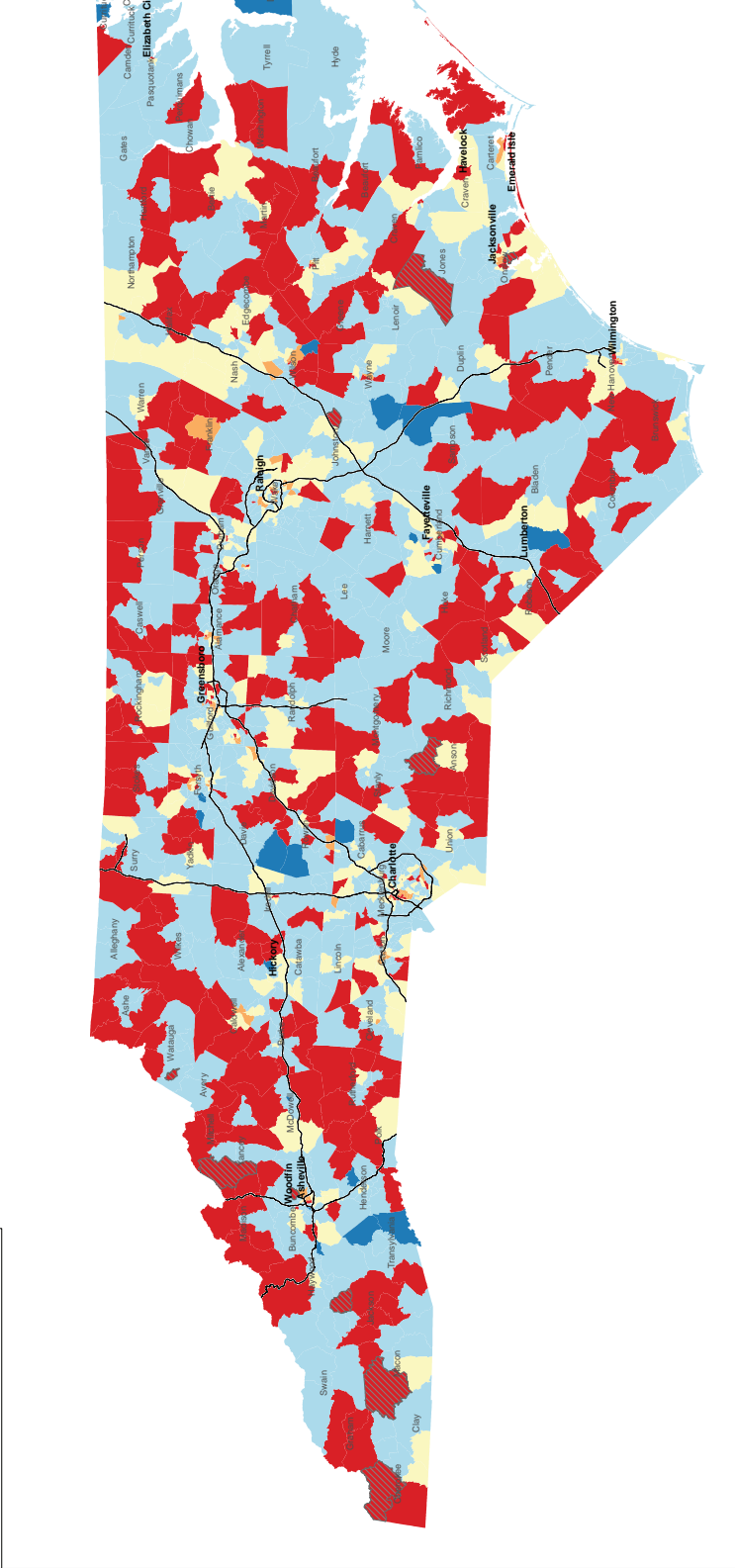
## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, but few healthy food outlets.

A zero score indicates no healthy food outlets (supermarkets, larger grocers, produce stores, independent health food stores) within the census tract.

**DATA SOURCES:**  
 Convenience stores - National Specialty Retailer  
 Supermarkets - IRI/USDA/2009  
 Produce stores - Supermarket  
 Fast food restaurants - NAFED 2008

Date of map: September, 2011

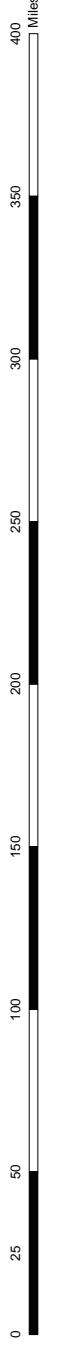


**Healthy Food Retailers = # Healthy Food Retailers X '00**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, independent grocers, and health food stores. Retailers that are not included are convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.

National mRFEI Score = 10  
 North Carolina mRFEI Score = 11



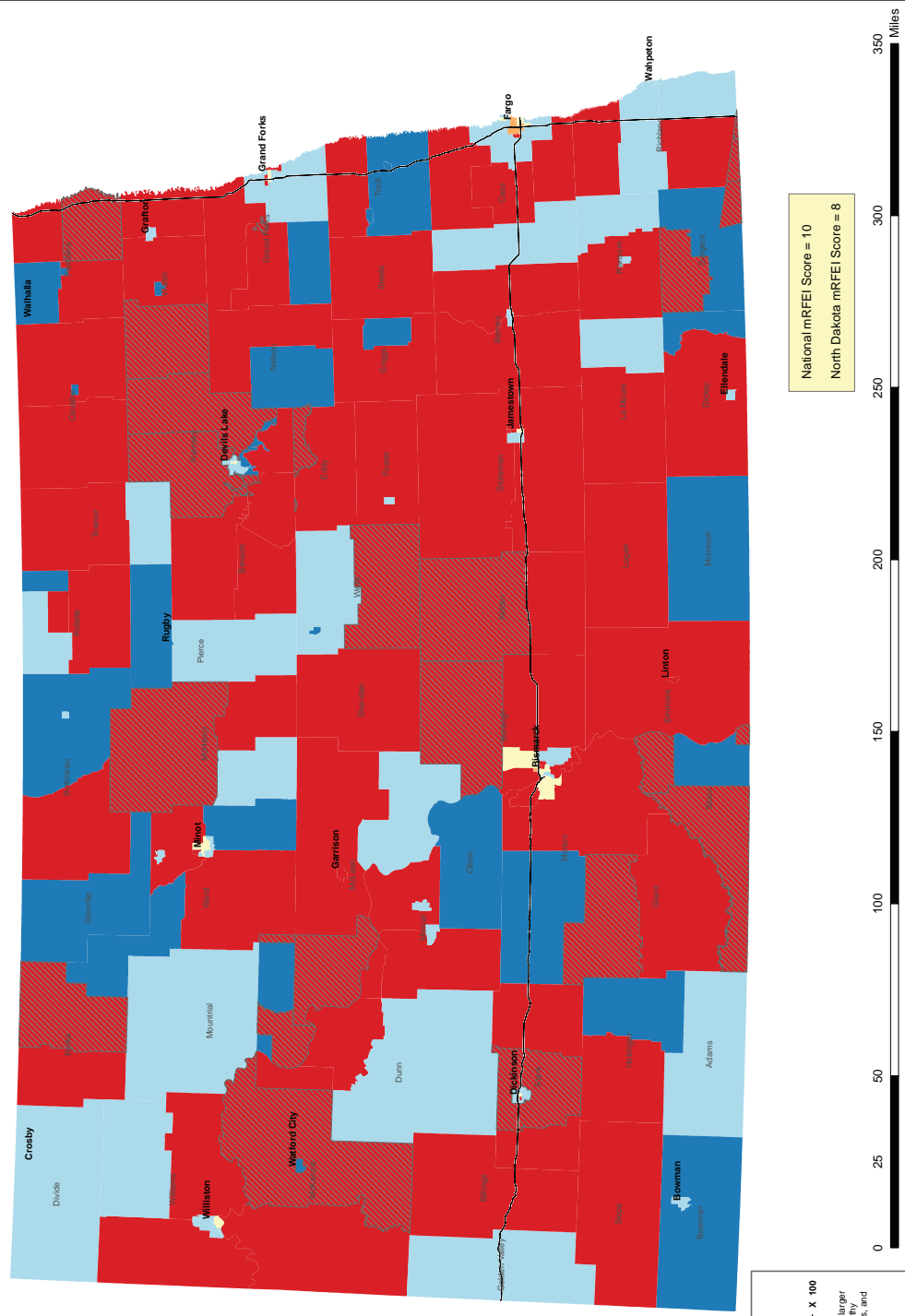
# North Dakota

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, and fewer supermarkets and fast food outlets. A zero score indicates no healthy food retailers (supermarkets, larger groceries, and fast food restaurants) within the census tract.

**DATA SOURCES:**  
 Census of Retail Trade - NAICS 542009  
 Convenience stores - Homeland Security Information Program database 2008  
 Fast food restaurants - NHTREC 2009

Date of map: September, 2011



National mRFEI Score = 10  
 North Dakota mRFEI Score = 8

The modified Retail Food Environment Index (mRFEI) measures the amount of healthy and less healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}}{\# \text{ Census Tract}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supermarkets, and produce stores.† Less healthy retailers include fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

# Ohio

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, and fewer healthy food retailers (supermarkets, larger grocers, produce stores, or supercenters) within census tracts.

**Legend:**

- No retail food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

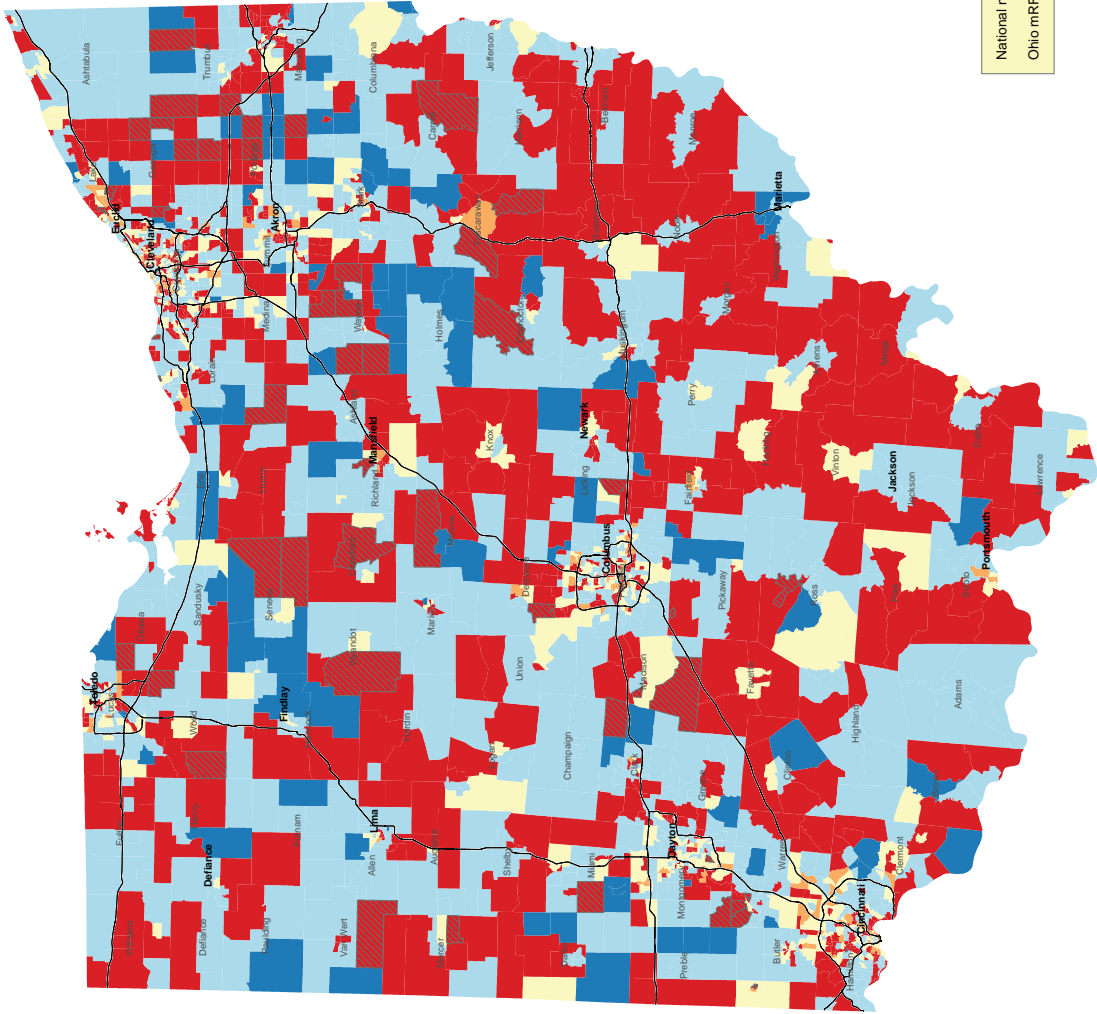
Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, and fewer healthy food retailers (supermarkets, larger grocers, produce stores, or supercenters) within census tracts.

As this map indicates on healthy food retailers (supermarkets, larger grocers, produce stores, or supercenters) within census tracts.

**DATA SOURCES:**  
 Retail Food Stores - USDA and Large Retailers - USDA  
 Supermarkets, Small and Large Grocers - USDA  
 Convenience stores - Homelid Safety Information Program Database 2008  
 Fast-food restaurants - NAVTEC 2009

Date of map: August, 2011



National mRFEI Score = 10  
 Ohio mRFEI Score = 9

The modified Retail Food Environment Index (mRFEI) is calculated as the number of healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers X 100**

**# Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.<sup>†</sup> Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.

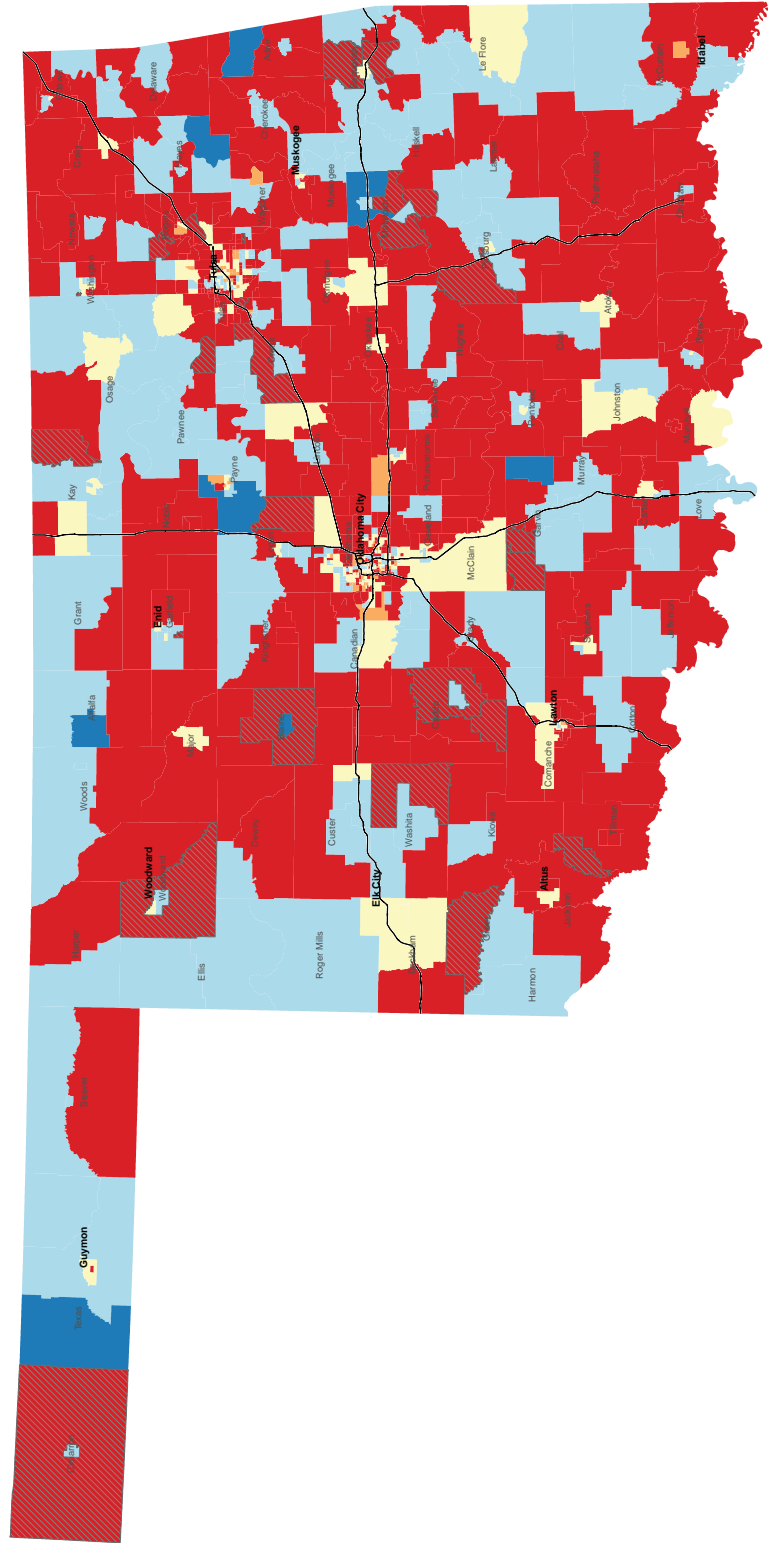
# Oklahoma

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers. Healthy food retailers (supermarkets, larger grocery stores, produce stores, or supermarkets) within census tracts.

**DATA SOURCES:**  
 Supermarkets - Small and Large Grocers, 2008  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011



National mRFEI Score = 10  
 Oklahoma mRFEI Score = 6

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using the formula:

**# Healthy Food Retailers** X 100  
**# Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supermarkets, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.





# Oregon

## Modified Retail Food Environment Index According to Census Tract

Lowest scores indicate that census tracts have the fewest healthy food retailers compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger grocers, produce stores, supercenters, fast food restaurants, approximately, etc.) within census tract.

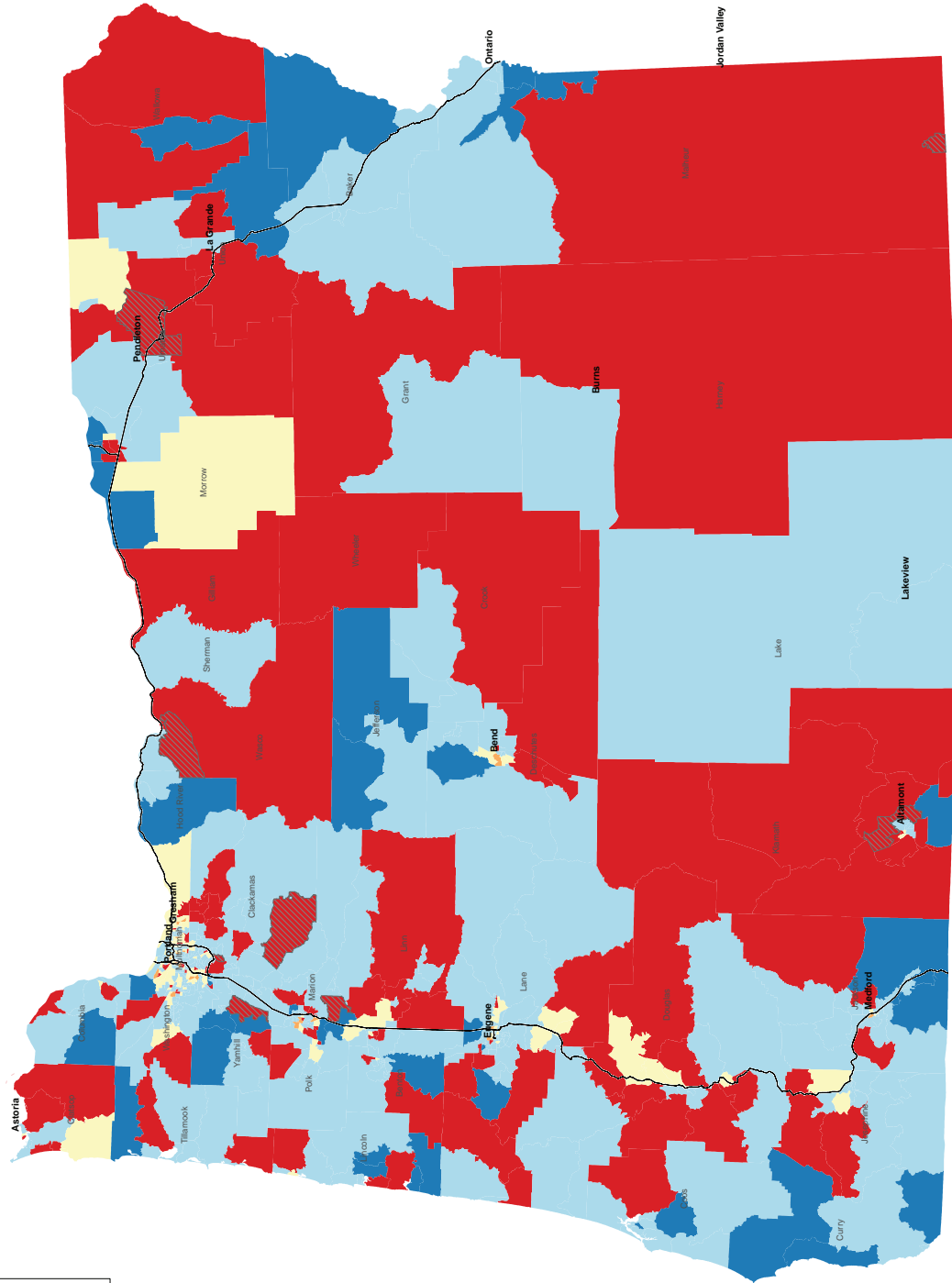
**DATA SOURCES:**  
 Small and Large Grocers, Convenience stores - Homeland Security  
 Supercenters - IRI/USA 2009  
 Produce Stores - IRI/USA 2009  
 Fast food restaurants - NUTREC 2009

Date of map: September, 2011

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

— Interstate Highways



National mRFEI Score = 10  
 Oregon mRFEI Score = 13

**# Healthy Food Retailers** X 100

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. †

† Data sources are listed in the legend.



# Pennsylvania

## Modified Retail Food Environment Index According to Census Tract

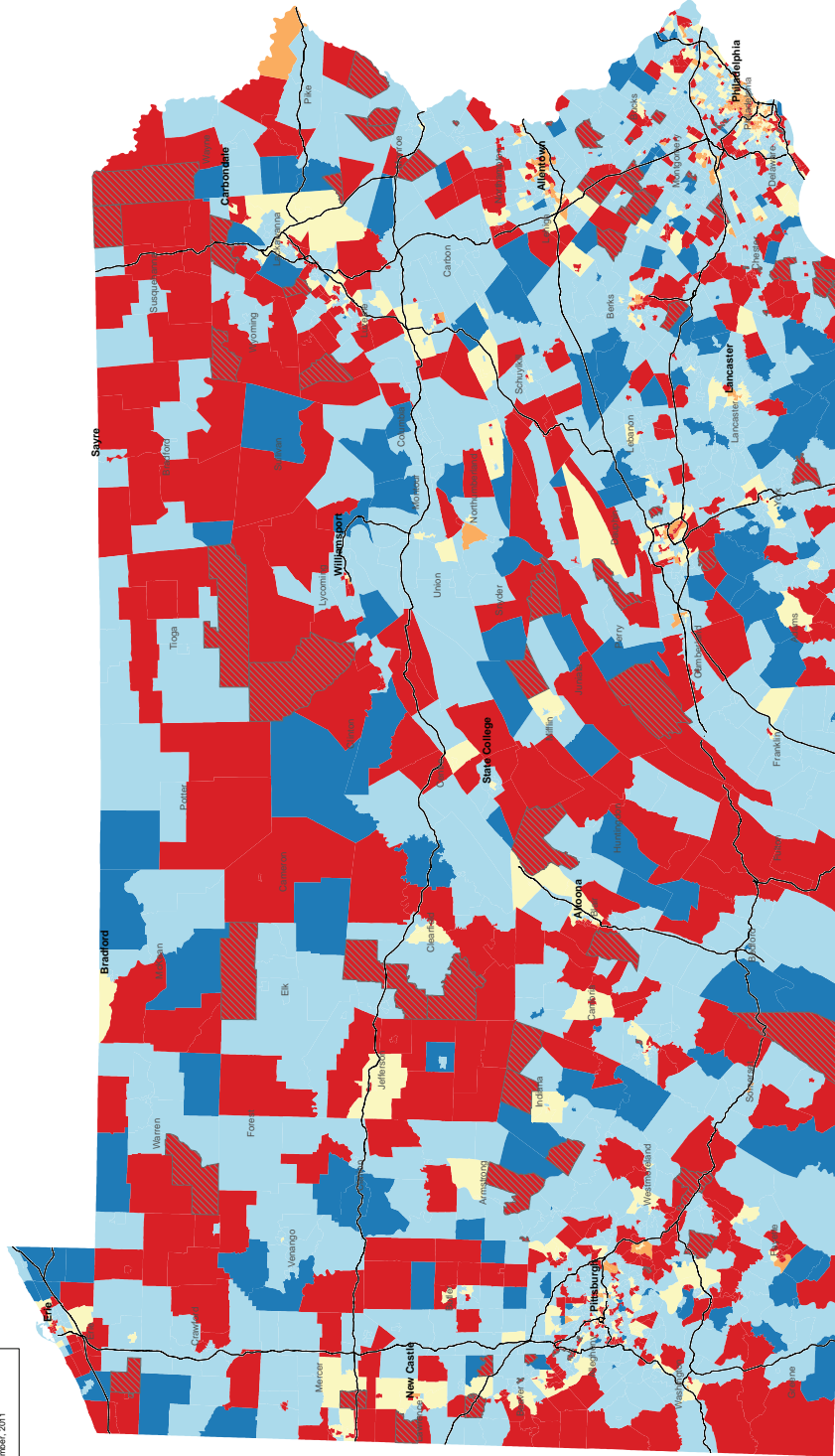
Lower scores indicate that census tracts have fewer healthy food retailers compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers, such as grocery stores, produce stores, or supermarkets within the census tract.

0.1 - 5  
5.1 - 10  
10.1 - 37.5  
37.6 - 100

Interstate Highways

Date of map: September, 2011



National mRFEI Score = 10  
Pennsylvania mRFEI Score = 11



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\# \text{ Healthy Food Retailers} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supermarkets, and produce stores.† Less healthy food retailers include fast-food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
  - No healthy food outlet within census tract
  - 0.1 - 5
  - 5.1 - 10
  - 10.1 - 37.5
  - 37.6 - 100
- Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

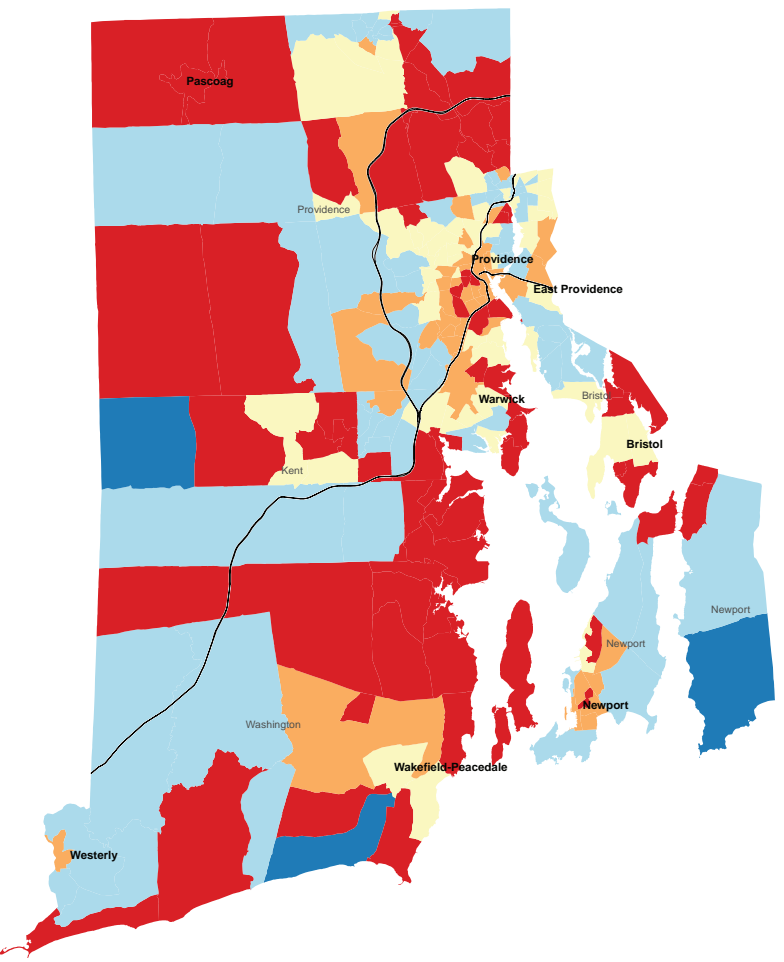
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## Rhode Island

### Modified Retail Food Environment Index According to Census Tract



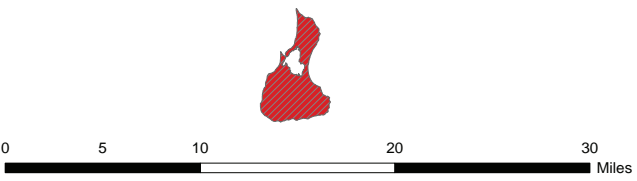
National mRFEI Score = 10  
 Rhode Island mRFEI Score = 5

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

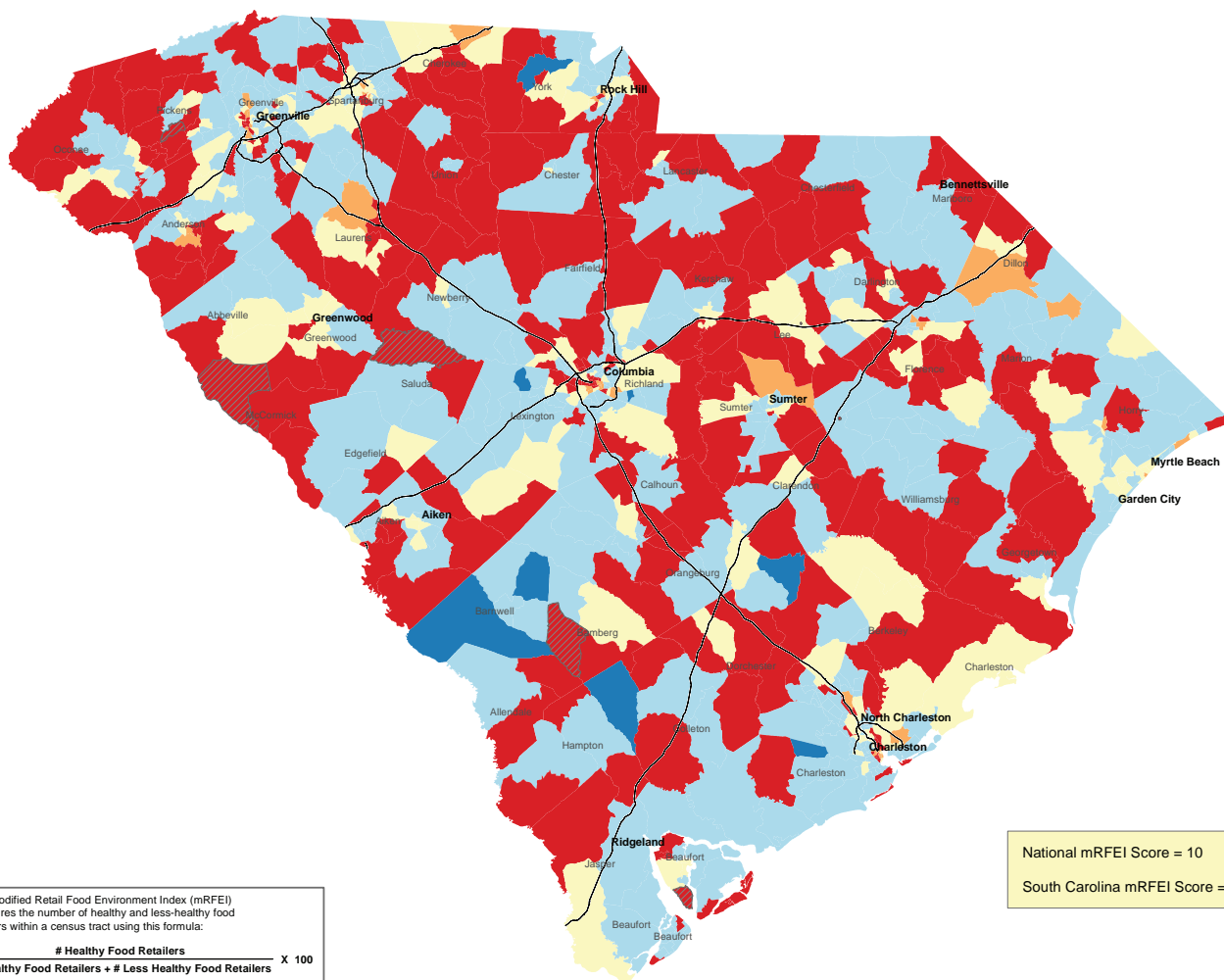
A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

DATA SOURCES:  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

## South Carolina

### Modified Retail Food Environment Index According to Census Tract

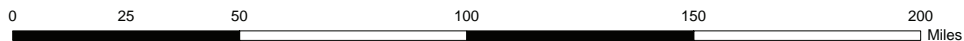


The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees. †

† Data sources are listed in the legend.



# South Dakota

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

Score indicates the number of healthy food retailers compared to the number of unhealthy food retailers.

A zero score indicates no healthy food retailers in the census tract.

A score of 1 indicates one healthy food retailer in the census tract.

A score of 2 indicates two healthy food retailers in the census tract.

A score of 3 indicates three healthy food retailers in the census tract.

A score of 4 indicates four healthy food retailers in the census tract.

A score of 5 indicates five healthy food retailers in the census tract.

A score of 6 indicates six healthy food retailers in the census tract.

A score of 7 indicates seven healthy food retailers in the census tract.

A score of 8 indicates eight healthy food retailers in the census tract.

A score of 9 indicates nine healthy food retailers in the census tract.

A score of 10 indicates ten healthy food retailers in the census tract.

A score of 11 indicates eleven healthy food retailers in the census tract.

A score of 12 indicates twelve healthy food retailers in the census tract.

A score of 13 indicates thirteen healthy food retailers in the census tract.

A score of 14 indicates fourteen healthy food retailers in the census tract.

A score of 15 indicates fifteen healthy food retailers in the census tract.

A score of 16 indicates sixteen healthy food retailers in the census tract.

A score of 17 indicates seventeen healthy food retailers in the census tract.

A score of 18 indicates eighteen healthy food retailers in the census tract.

A score of 19 indicates nineteen healthy food retailers in the census tract.

A score of 20 indicates twenty healthy food retailers in the census tract.

A score of 21 indicates twenty-one healthy food retailers in the census tract.

A score of 22 indicates twenty-two healthy food retailers in the census tract.

A score of 23 indicates twenty-three healthy food retailers in the census tract.

A score of 24 indicates twenty-four healthy food retailers in the census tract.

A score of 25 indicates twenty-five healthy food retailers in the census tract.

A score of 26 indicates twenty-six healthy food retailers in the census tract.

A score of 27 indicates twenty-seven healthy food retailers in the census tract.

A score of 28 indicates twenty-eight healthy food retailers in the census tract.

A score of 29 indicates twenty-nine healthy food retailers in the census tract.

A score of 30 indicates thirty healthy food retailers in the census tract.

A score of 31 indicates thirty-one healthy food retailers in the census tract.

A score of 32 indicates thirty-two healthy food retailers in the census tract.

A score of 33 indicates thirty-three healthy food retailers in the census tract.

A score of 34 indicates thirty-four healthy food retailers in the census tract.

A score of 35 indicates thirty-five healthy food retailers in the census tract.

A score of 36 indicates thirty-six healthy food retailers in the census tract.

A score of 37 indicates thirty-seven healthy food retailers in the census tract.

A score of 38 indicates thirty-eight healthy food retailers in the census tract.

A score of 39 indicates thirty-nine healthy food retailers in the census tract.

A score of 40 indicates forty healthy food retailers in the census tract.

A score of 41 indicates forty-one healthy food retailers in the census tract.

A score of 42 indicates forty-two healthy food retailers in the census tract.

A score of 43 indicates forty-three healthy food retailers in the census tract.

A score of 44 indicates forty-four healthy food retailers in the census tract.

A score of 45 indicates forty-five healthy food retailers in the census tract.

A score of 46 indicates forty-six healthy food retailers in the census tract.

A score of 47 indicates forty-seven healthy food retailers in the census tract.

A score of 48 indicates forty-eight healthy food retailers in the census tract.

A score of 49 indicates forty-nine healthy food retailers in the census tract.

A score of 50 indicates fifty healthy food retailers in the census tract.

A score of 51 indicates fifty-one healthy food retailers in the census tract.

A score of 52 indicates fifty-two healthy food retailers in the census tract.

A score of 53 indicates fifty-three healthy food retailers in the census tract.

A score of 54 indicates fifty-four healthy food retailers in the census tract.

A score of 55 indicates fifty-five healthy food retailers in the census tract.

A score of 56 indicates fifty-six healthy food retailers in the census tract.

A score of 57 indicates fifty-seven healthy food retailers in the census tract.

A score of 58 indicates fifty-eight healthy food retailers in the census tract.

A score of 59 indicates fifty-nine healthy food retailers in the census tract.

A score of 60 indicates sixty healthy food retailers in the census tract.

A score of 61 indicates sixty-one healthy food retailers in the census tract.

A score of 62 indicates sixty-two healthy food retailers in the census tract.

A score of 63 indicates sixty-three healthy food retailers in the census tract.

A score of 64 indicates sixty-four healthy food retailers in the census tract.

A score of 65 indicates sixty-five healthy food retailers in the census tract.

A score of 66 indicates sixty-six healthy food retailers in the census tract.

A score of 67 indicates sixty-seven healthy food retailers in the census tract.

A score of 68 indicates sixty-eight healthy food retailers in the census tract.

A score of 69 indicates sixty-nine healthy food retailers in the census tract.

A score of 70 indicates seventy healthy food retailers in the census tract.

A score of 71 indicates seventy-one healthy food retailers in the census tract.

A score of 72 indicates seventy-two healthy food retailers in the census tract.

A score of 73 indicates seventy-three healthy food retailers in the census tract.

A score of 74 indicates seventy-four healthy food retailers in the census tract.

A score of 75 indicates seventy-five healthy food retailers in the census tract.

A score of 76 indicates seventy-six healthy food retailers in the census tract.

A score of 77 indicates seventy-seven healthy food retailers in the census tract.

A score of 78 indicates seventy-eight healthy food retailers in the census tract.

A score of 79 indicates seventy-nine healthy food retailers in the census tract.

A score of 80 indicates eighty healthy food retailers in the census tract.

A score of 81 indicates eighty-one healthy food retailers in the census tract.

A score of 82 indicates eighty-two healthy food retailers in the census tract.

A score of 83 indicates eighty-three healthy food retailers in the census tract.

A score of 84 indicates eighty-four healthy food retailers in the census tract.

A score of 85 indicates eighty-five healthy food retailers in the census tract.

A score of 86 indicates eighty-six healthy food retailers in the census tract.

A score of 87 indicates eighty-seven healthy food retailers in the census tract.

A score of 88 indicates eighty-eight healthy food retailers in the census tract.

A score of 89 indicates eighty-nine healthy food retailers in the census tract.

A score of 90 indicates ninety healthy food retailers in the census tract.

A score of 91 indicates ninety-one healthy food retailers in the census tract.

A score of 92 indicates ninety-two healthy food retailers in the census tract.

A score of 93 indicates ninety-three healthy food retailers in the census tract.

A score of 94 indicates ninety-four healthy food retailers in the census tract.

A score of 95 indicates ninety-five healthy food retailers in the census tract.

A score of 96 indicates ninety-six healthy food retailers in the census tract.

A score of 97 indicates ninety-seven healthy food retailers in the census tract.

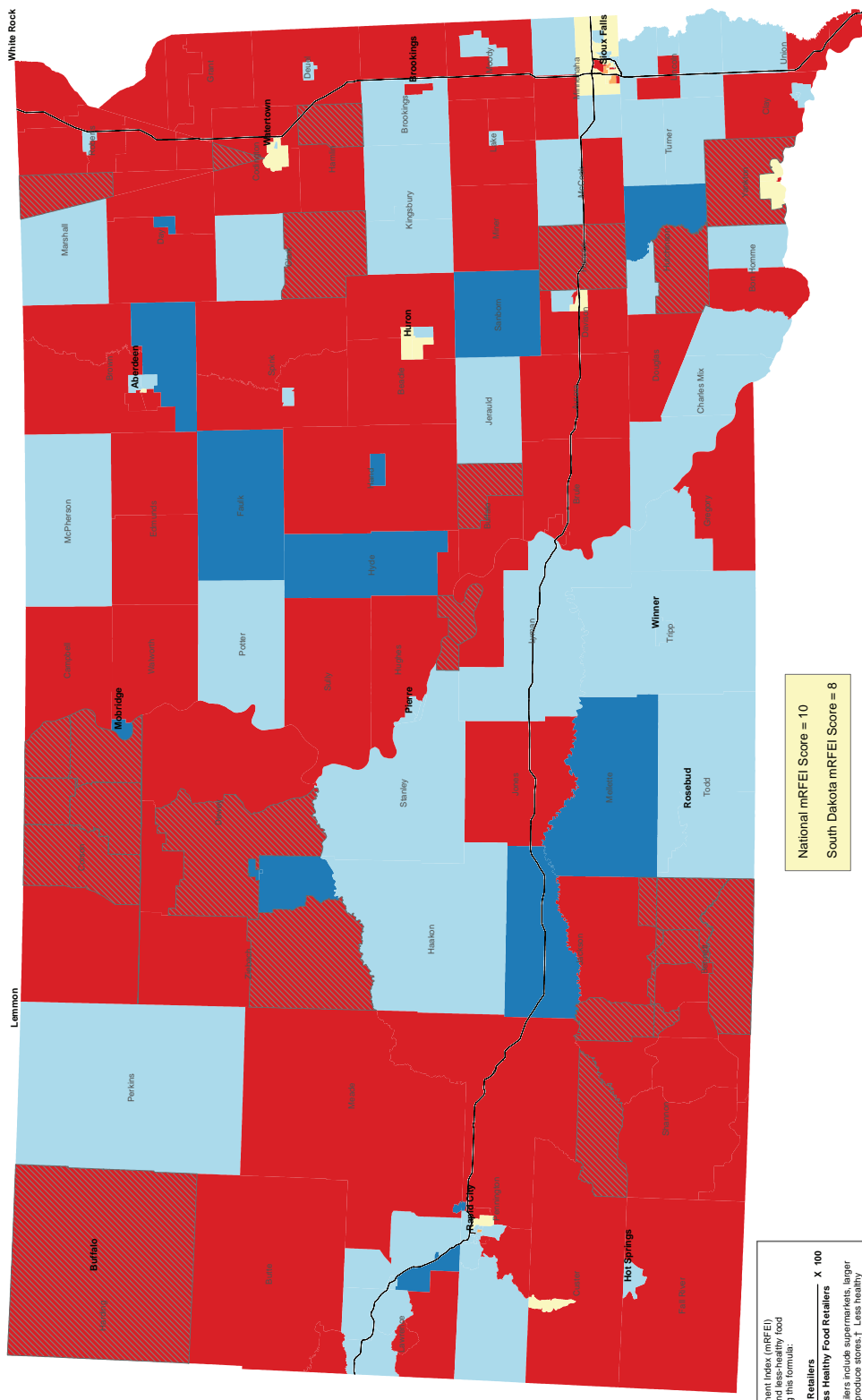
A score of 98 indicates ninety-eight healthy food retailers in the census tract.

A score of 99 indicates ninety-nine healthy food retailers in the census tract.

A score of 100 indicates one hundred healthy food retailers in the census tract.

Interstate Highways

Date of map: September, 2011



National mRFEI Score = 10  
 South Dakota mRFEI Score = 8

**The Modified Retail Food Environment Index (mRFEI)** measures the number of healthy and less healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers** X 100  
**# Healthy Food Retailers + # Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

# Tennessee

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

Lower scores indicate that census tracts contain many convenience stores and fast food outlets, and fewer supermarkets and healthy food retailers.

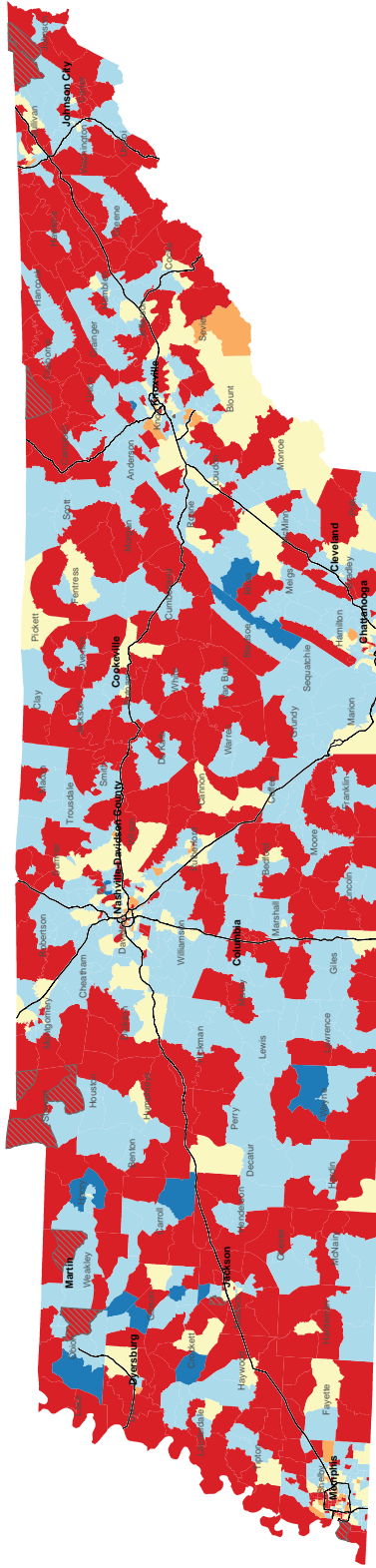
A zero score indicates no healthy food retailers (supermarkets, large grocers, etc.) are present in the census tract. A score of 100 is approximately within the census tract.

**DATA SOURCES:** All data from Census, Proximate Stores, Supercenters - INFOUSA 2009  
Convenience stores - Homeland Security Information Program Database 2008  
Fast food restaurants - NMYFEC 2009

Date of map: August, 2011

Legend:

- No retail food outlet
- within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways



National mRFEI Score = 10  
Tennessee mRFEI Score = 10



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and unhealthy food retailers within a census tract using the formula:

**# Healthy Food Retailers x 100**

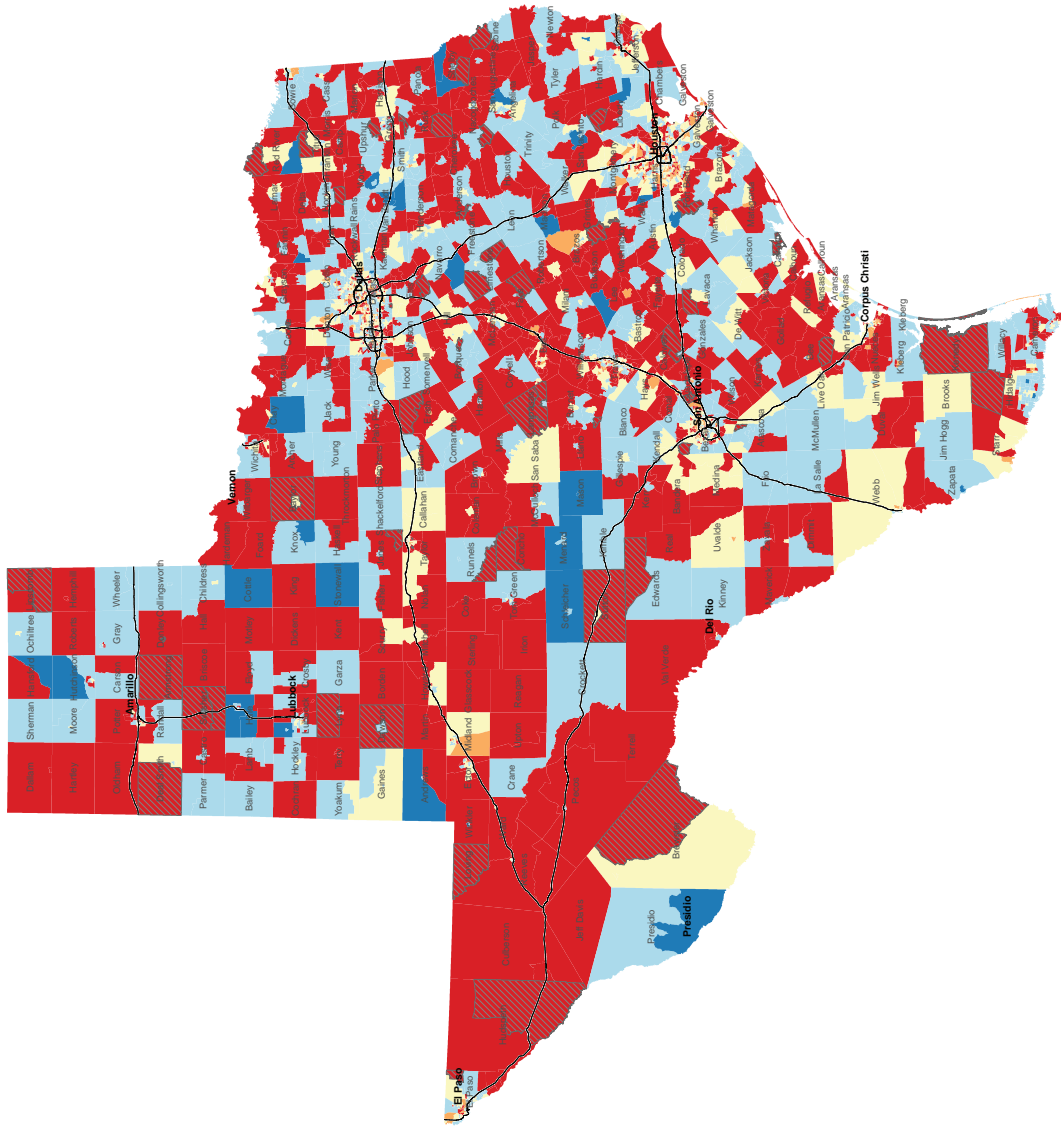
For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

# Texas

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**  
 Legend:  
 ■ No retail food outlet within census tract  
 ■ No healthy food outlet within census tract  
 ■ 0.1 - 5  
 ■ 5.1 - 10  
 ■ 10.1 - 37.5  
 ■ 37.6 - 100  
 — Interstate Highways  
 Date of map: August, 2011



National mRFEI Score = 10  
 Texas mRFEI Score = 7

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using the formula:  

$$\# \text{ Healthy Food Retailers} \times 100$$
 For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†  
 † Data sources are listed in the legend.

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

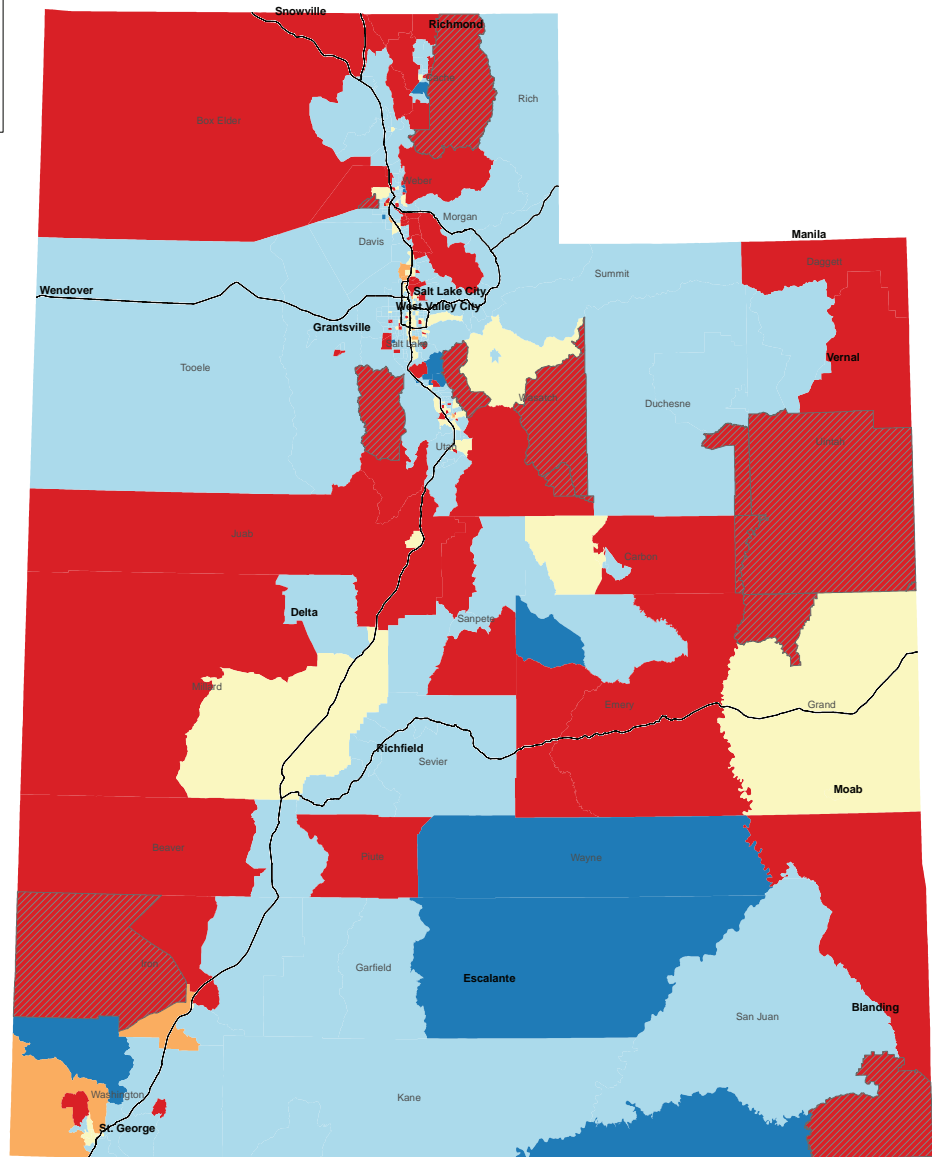
**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

Interstate Highways

## Utah

### Modified Retail Food Environment Index According to Census Tract



National mRFEI Score = 10  
 Utah mRFEI Score = 13

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. † Less healthy food retailers include convenience stores, fast food restaurants, and



**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

DATA SOURCES:  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: August, 2011

— Interstate Highways

National mRFEI Score = 10  
 Vermont mRFEI Score = 13

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

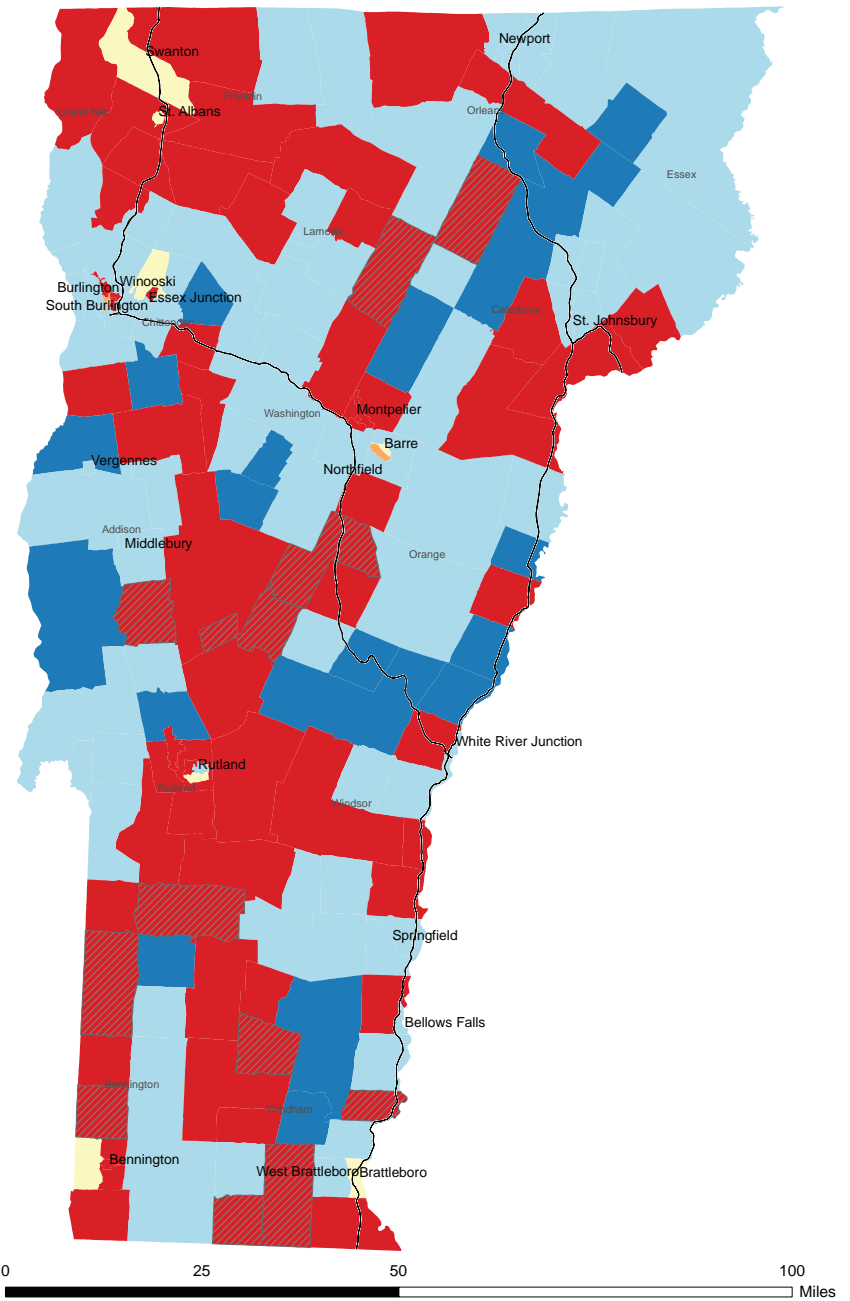
$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

# Vermont

## Modified Retail Food Environment Index According to Census Tract



# Virginia

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

Lower scores indicate that census tracts contain many convenience stores and a lot of healthy food retailers. Higher scores indicate that census tracts contain many convenience stores and few healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger grocers, pharmacies, or supermarkets) within the census tract.

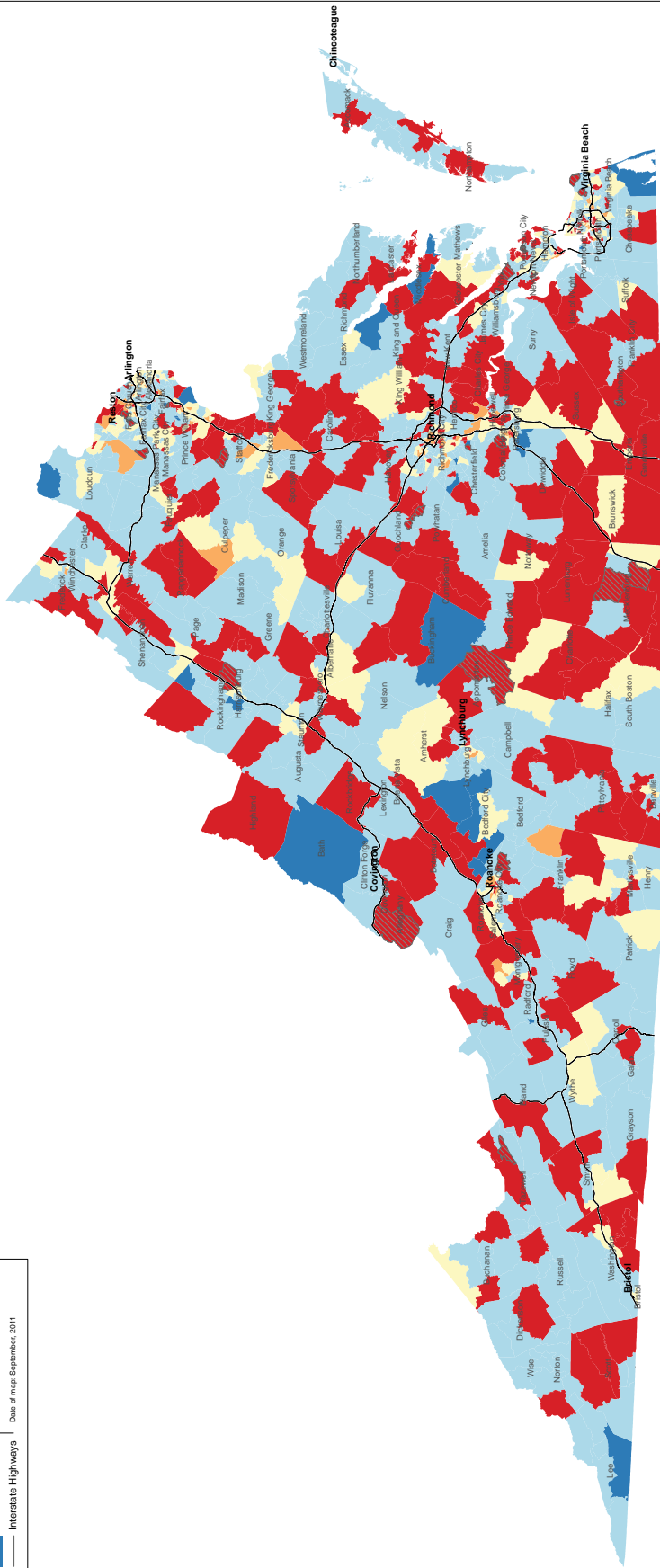
**DATA SOURCE:** USDA Food Access Research Atlas (FARA) 2009  
 Census Bureau, Supercenters - INDUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NATEC 2009

Date of map: September, 2011

Interstate Highways

0.1 - 5  
 5.1 - 10  
 10.1 - 37.5  
 37.6 - 100

No retail food outlet within census tract  
 No healthy food outlet within census tract



National mRFEI Score = 10  
 Virginia mRFEI Score = 11

The modified Retail Food Environment Index (mRFEI) is calculated as the number of healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers** X 100  
**# Healthy Food Retailers + # Less Healthy Food Retailers**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.



# Washington

## Modified Retail Food Environment Index According to Census Tract

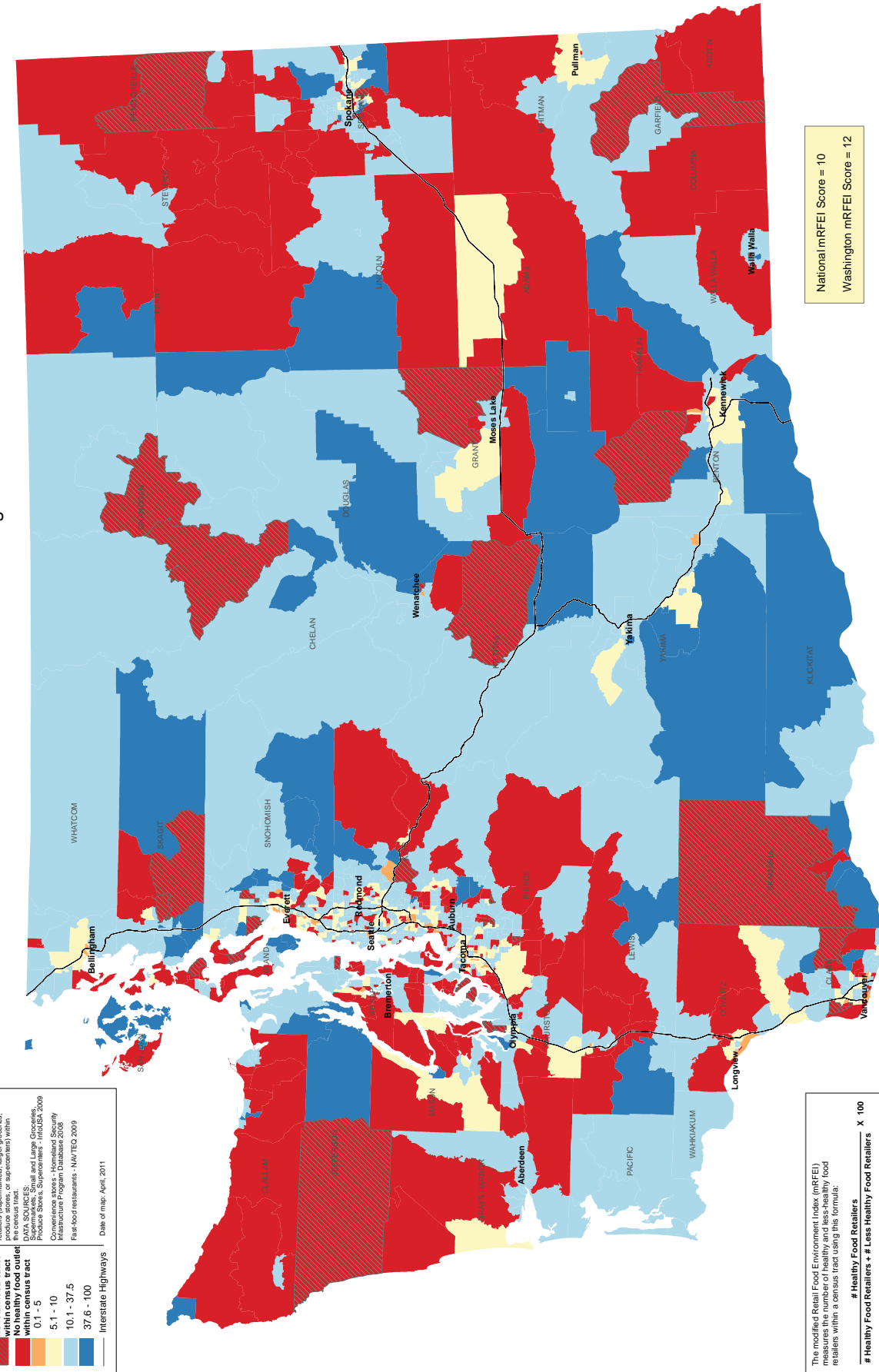
Lower scores indicate that census tracts have fewer healthy food retailers compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, and convenience stores) within the census tract.

DATA SOURCES:  
 Census of Retail Trade - NAFTIC 2009  
 Produce Stores & Supercenters - InfoUSA, 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEC 2009

Date of map: April, 2011

Interstate Highways



The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

**# Healthy Food Retailers + # Less Healthy Food Retailers X 100**

For this indicator, healthy food retailers include supermarkets, larger grocery stores, and produce stores. Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.

National mRFEI Score = 10  
 Washington mRFEI Score = 12



# West Virginia

## Modified Retail Food Environment Index According to Census Tract

Lower scores indicate that census tracts have fewer healthy food retailers compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger grocery stores, convenience stores, fast food restaurants) within the census tract.

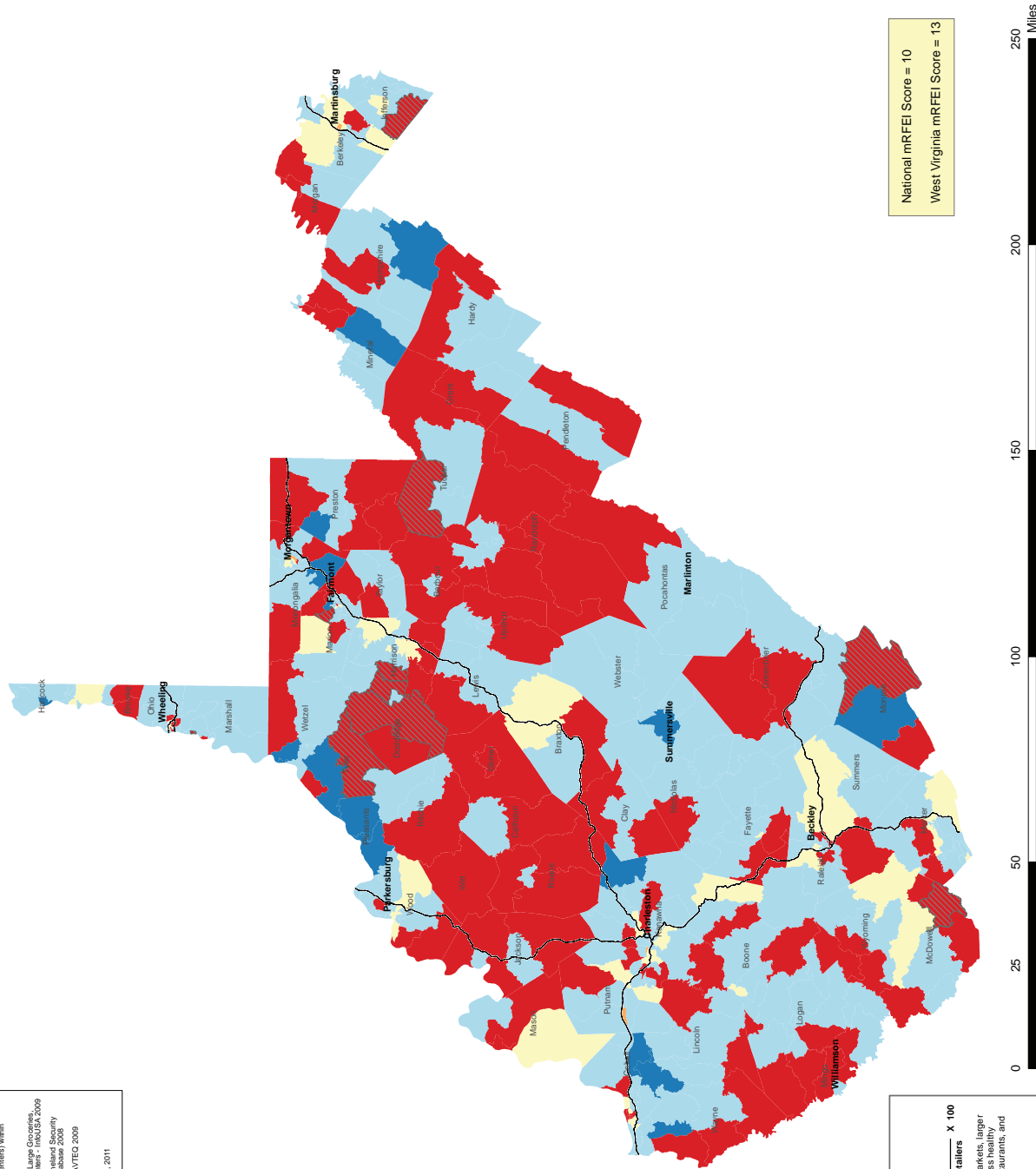
DATA SOURCE: Small and Large Groceries, Produce Stores, Supercenters - INUSA 2009  
Convenience stores - Homeland Security Infrastructure Program Database 2006  
Fast food restaurants - NAVTEQ 2009

Date of map: September, 2011

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

Interstate Highways



National mRFEI Score = 10  
West Virginia mRFEI Score = 13

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger food retailers, convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.<sup>†</sup>

<sup>†</sup> Data sources are listed in the legend.

# Wisconsin

## Modified Retail Food Environment Index According to Census Tract

**Modified Retail Food Environment Index (By U.S. Census Tract)**

- No retail food outlet within census tract
- No healthy food outlet within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100

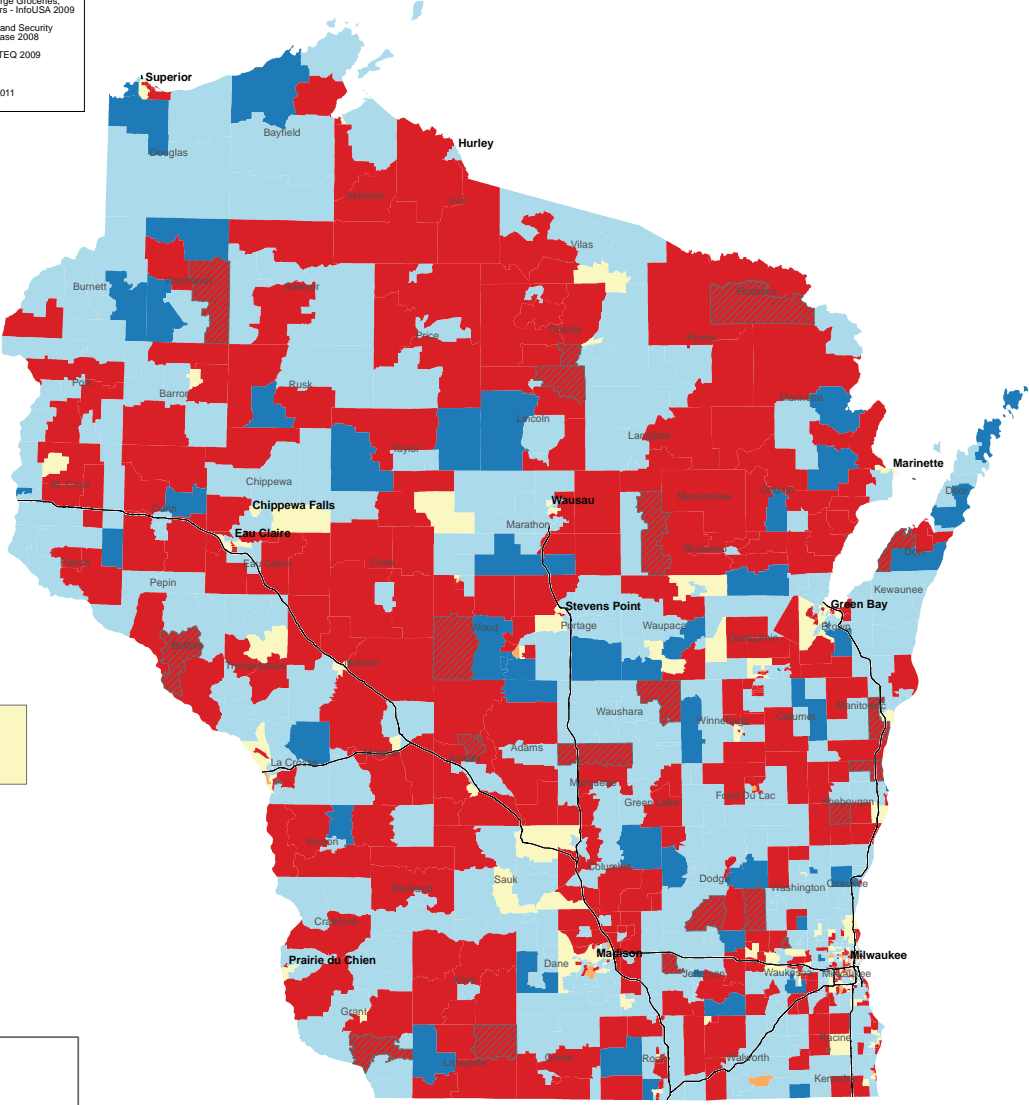
— Interstate Highways

Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, produce stores, or supercenters) within the census tract.

**DATA SOURCES:**  
 Supermarkets, Small and Large Groceries, Produce Stores, Supercenters - InfoUSA 2009  
 Convenience stores - Homeland Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

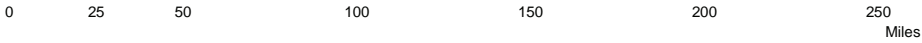


National mRFEI Score = 10  
 Wisconsin mRFEI Score = 11

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

$$\frac{\# \text{ Healthy Food Retailers}}{\# \text{ Healthy Food Retailers} + \# \text{ Less Healthy Food Retailers}} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores.† Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†



# Wyoming

## Modified Retail Food Environment Index According to Census Tract

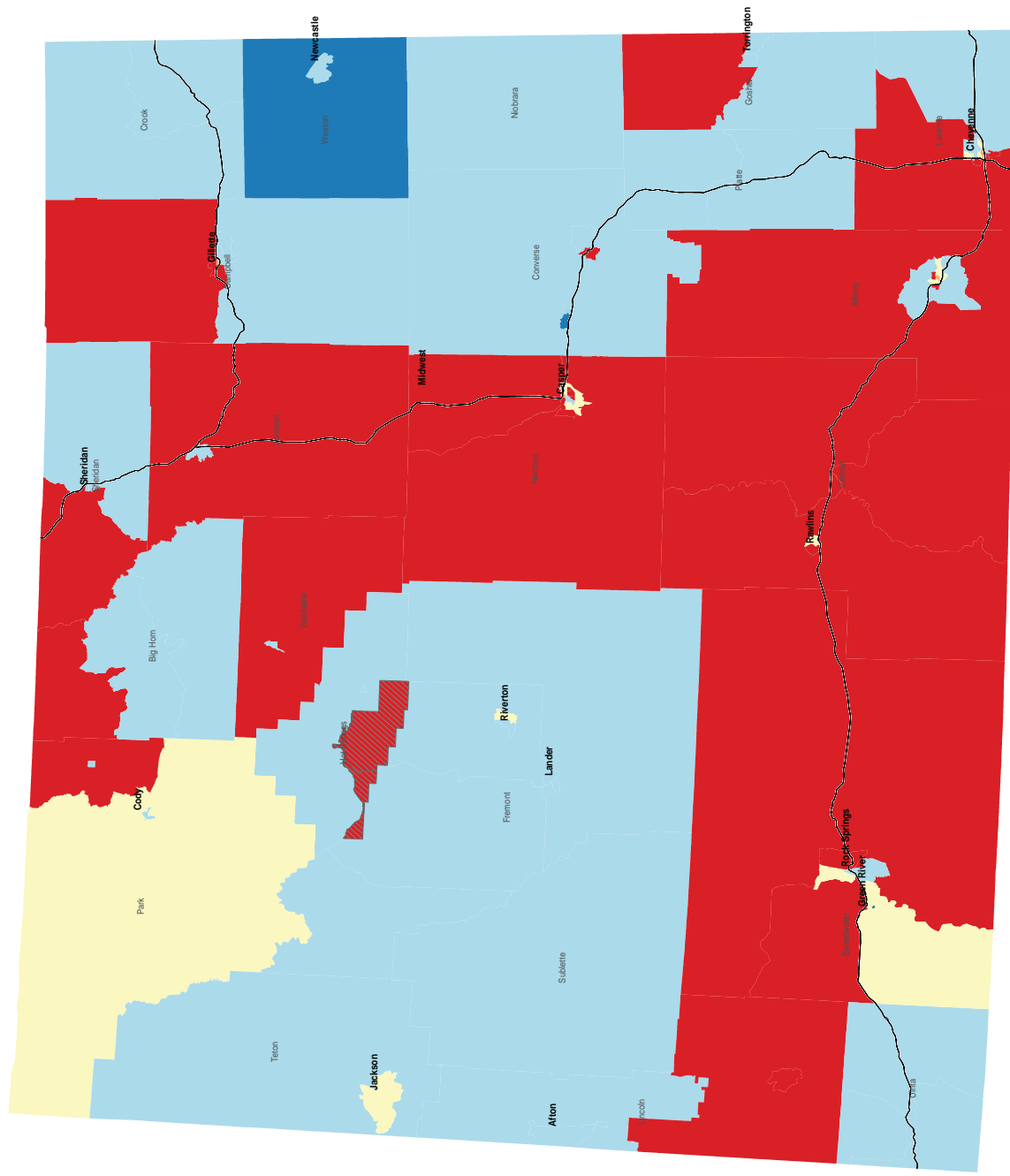
Lower scores indicate that census tracts have fewer healthy food retailers compared to the number of healthy food retailers.

A zero score indicates no healthy food retailers (supermarkets, larger groceries, fast food restaurants, convenience stores, or supermarkets) within the census tract.

DATA SOURCES:  
 Supermarkets, Small and Large Groceries: USDA, National Agricultural Statistics Service, Census of Agriculture, 2007  
 Convenience stores - MarketScan, Security Infrastructure Program Database 2008  
 Fast-food restaurants - NAVTEQ 2009

Date of map: September, 2011

- No retail food outlet
- 0 healthy food retailers within census tract
- 0.1 - 5
- 5.1 - 10
- 10.1 - 37.5
- 37.6 - 100
- Interstate Highways



National mRFEI Score = 10  
 Wyoming mRFEI Score = 10

The modified Retail Food Environment Index (mRFEI) is a measure of the number of healthy food retailers within a census tract using this formula:

$$\# \text{ Healthy Food Retailers} \times 100$$

For this indicator, healthy food retailers include supermarkets, larger food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.†

† Data sources are listed in the legend.

