

# How Do Farmers Markets Impact Food Access in Suffolk County, MA?

## Introduction

In the summer of 2012, the USDA identified over 7,800 farmers markets operating in the United States and 300 of those markets are right here in Massachusetts. This announcement was characterized most notably by the nation wide growth in markets: a 9.6% increase from 2011. Kathleen Merrigan, former Agriculture Deputy Secretary said, “Farmers markets are a critical ingredient to our nation’s food system. These outlets provide benefits not only to the farmers looking for important income opportunities, but also to the communities looking for fresh, healthy foods.”

Just one year earlier, however, the New York Times published an article on how the growth of farmers markets in some areas of the country had outstripped demand. The Federation of Massachusetts Farmers Markets actually discouraged some groups from opening new markets near already established and thriving ones. The oversaturation resulted in lower turnout at individual markets and required farmers to attend more markets to make the same number of sales.

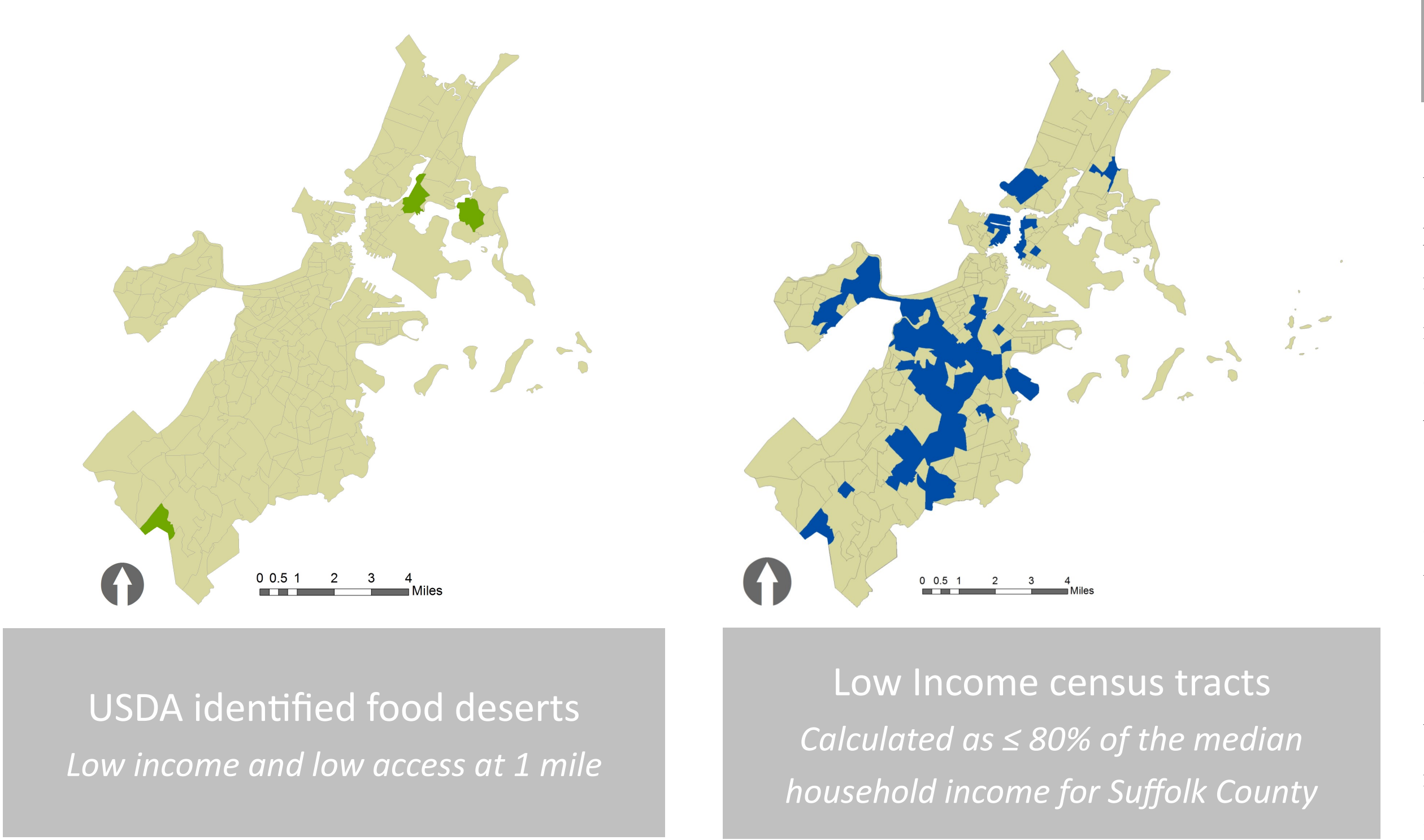
And all the while, the food justice movement was exposing the problem right under our noses. Food deserts. The USDA classifies food deserts as low-income areas that also have low-access. These two contrasting movements were sweeping across the country, but were not interacting. Given the farmers market situation in Massachusetts and increasing attention on both food deserts and the obesity epidemic, I thought it was fair to ask if and how farmers markets impact food access.

## Methods

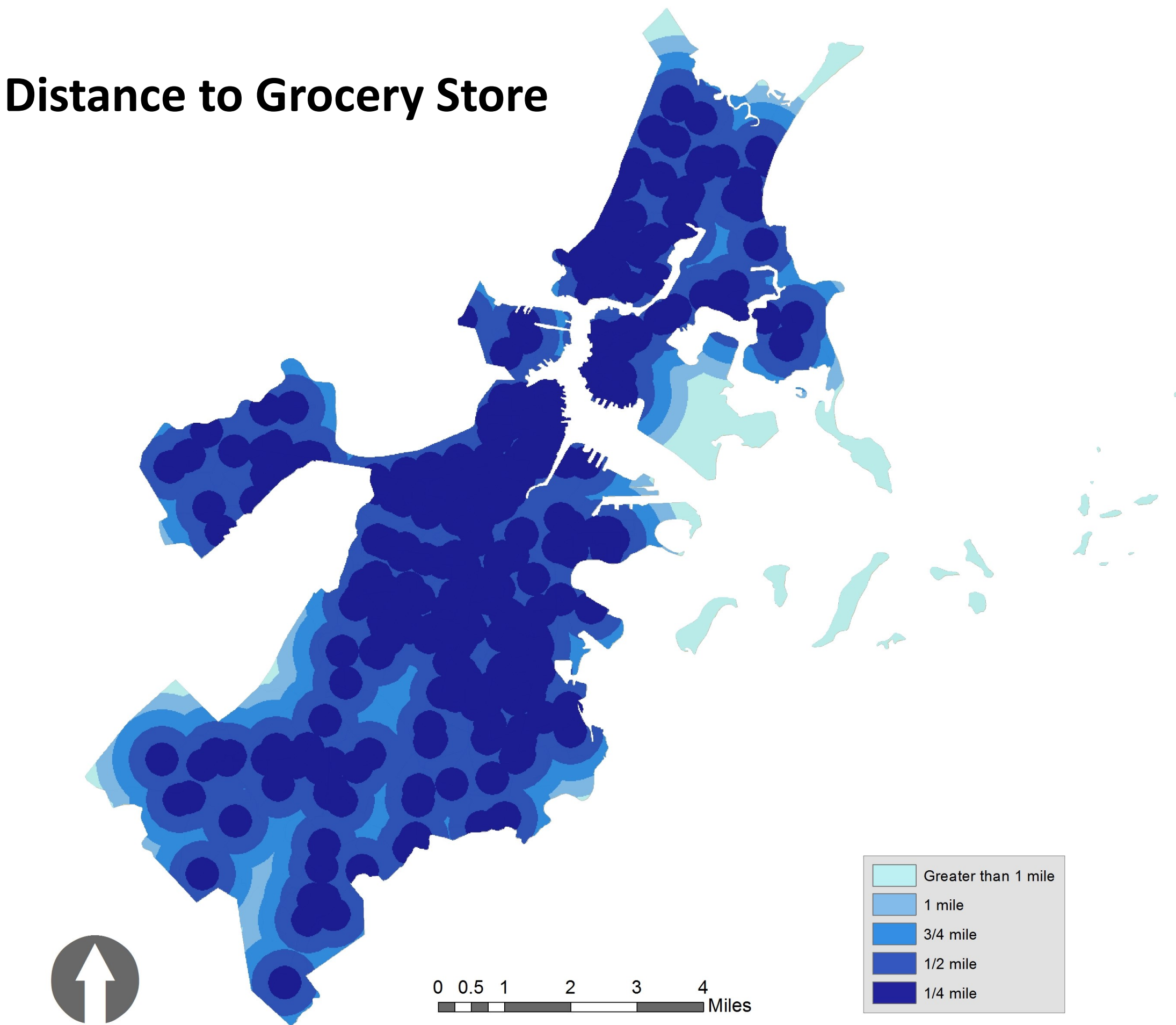
I utilized 2007-2011 American Community Survey 5-Year Estimates to get information on income and then used ReferenceUSA to gather the addresses of grocery stores in Suffolk County. “Grocery store” was defined as supermarkets and other grocery (except convenience) stores using the NAICS code 445110. I collected the farmers market locations myself through the Federation of Massachusetts Farmers Markets and City of Boston resources. In my analysis, I did not take into account the season during which these farmers markets operate, nor their business days/hours. I also used USDA data from their Food Desert Atlas to show the three identified areas in Suffolk County, but chose to create my own criteria for analysis and not further integrate this information into my project.

After geocoding the stores and markets, I created a layer with Euclidean distances from the nearest grocery store or farmers market and then I reclassified the data to show quarter mile, half mile, three-quarter mile and mile intervals. I showed both of those results in separate maps, and then created an aggregate map of both results.

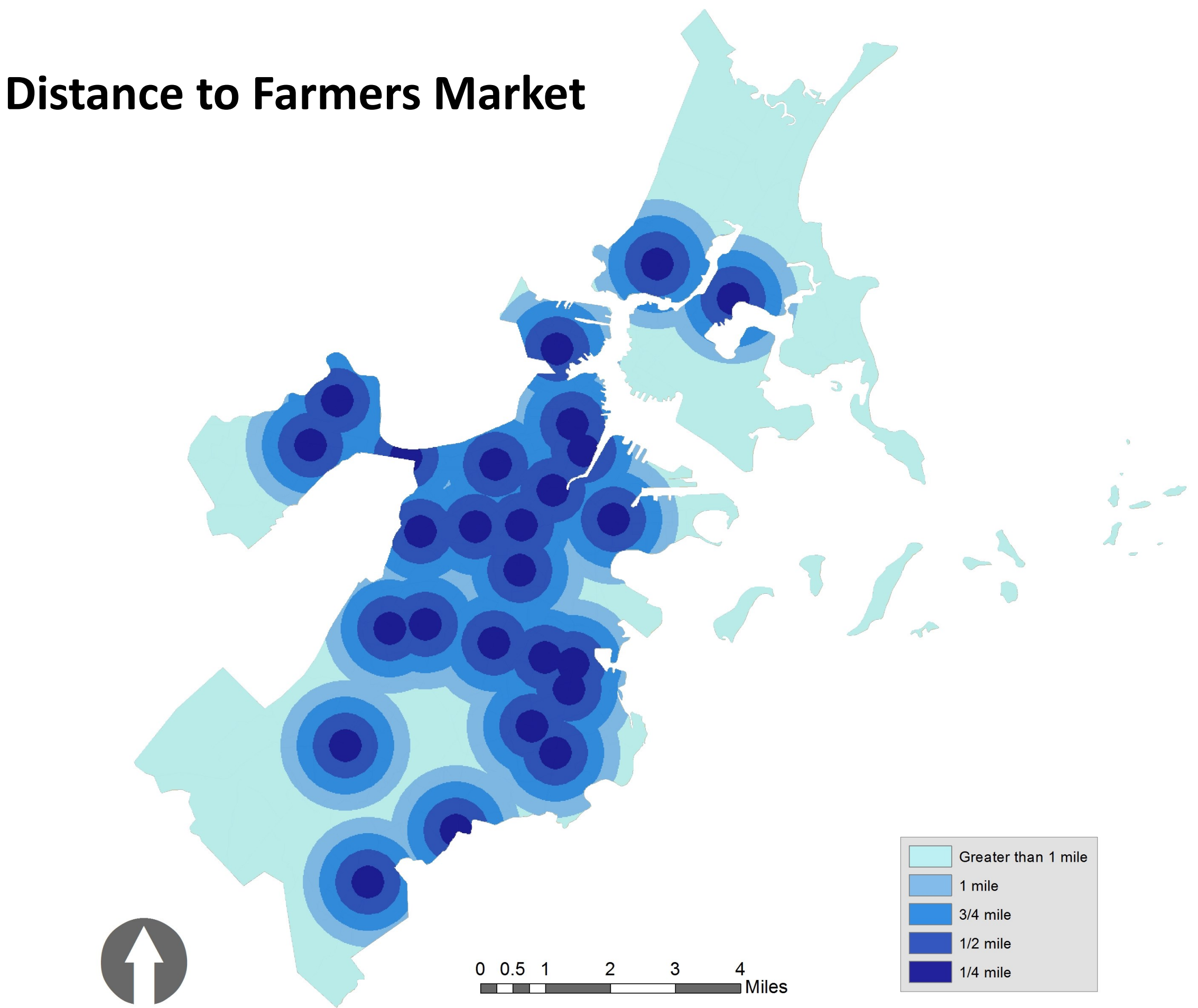
In the aggregate map, the low income census tracts were overlaid with the distance data to show how these layers interact. This analysis does not take into account access to public transportation or a vehicle, but focuses on walking distances as a universal measure of access. I also acknowledged and chose to disregard the “greater than 1 mile” sections created by Logan Airport and the Boston Harbor Islands largely because no one permanently resides in those locations.



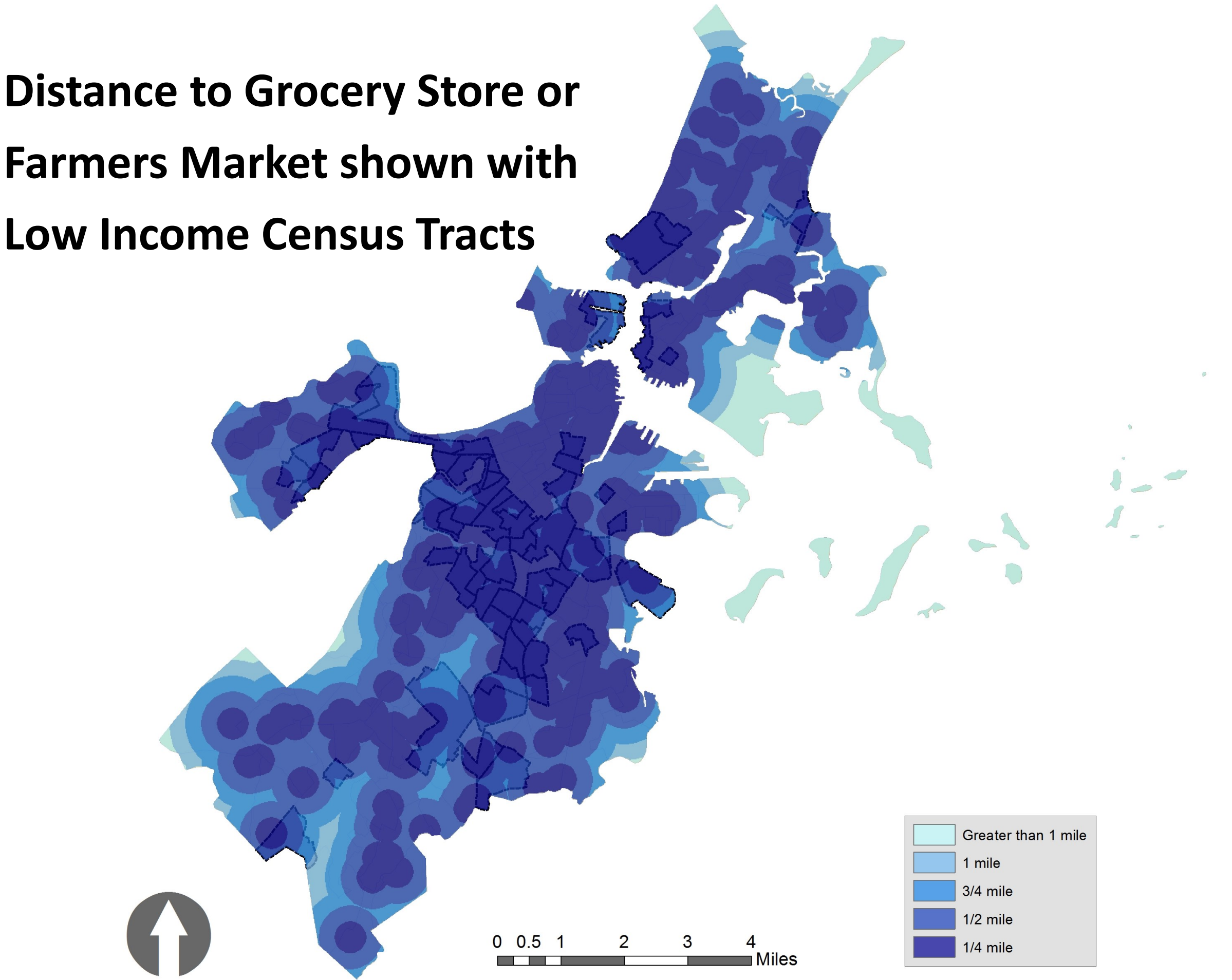
## Distance to Grocery Store



## Distance to Farmers Market



## Distance to Grocery Store or Farmers Market shown with Low Income Census Tracts



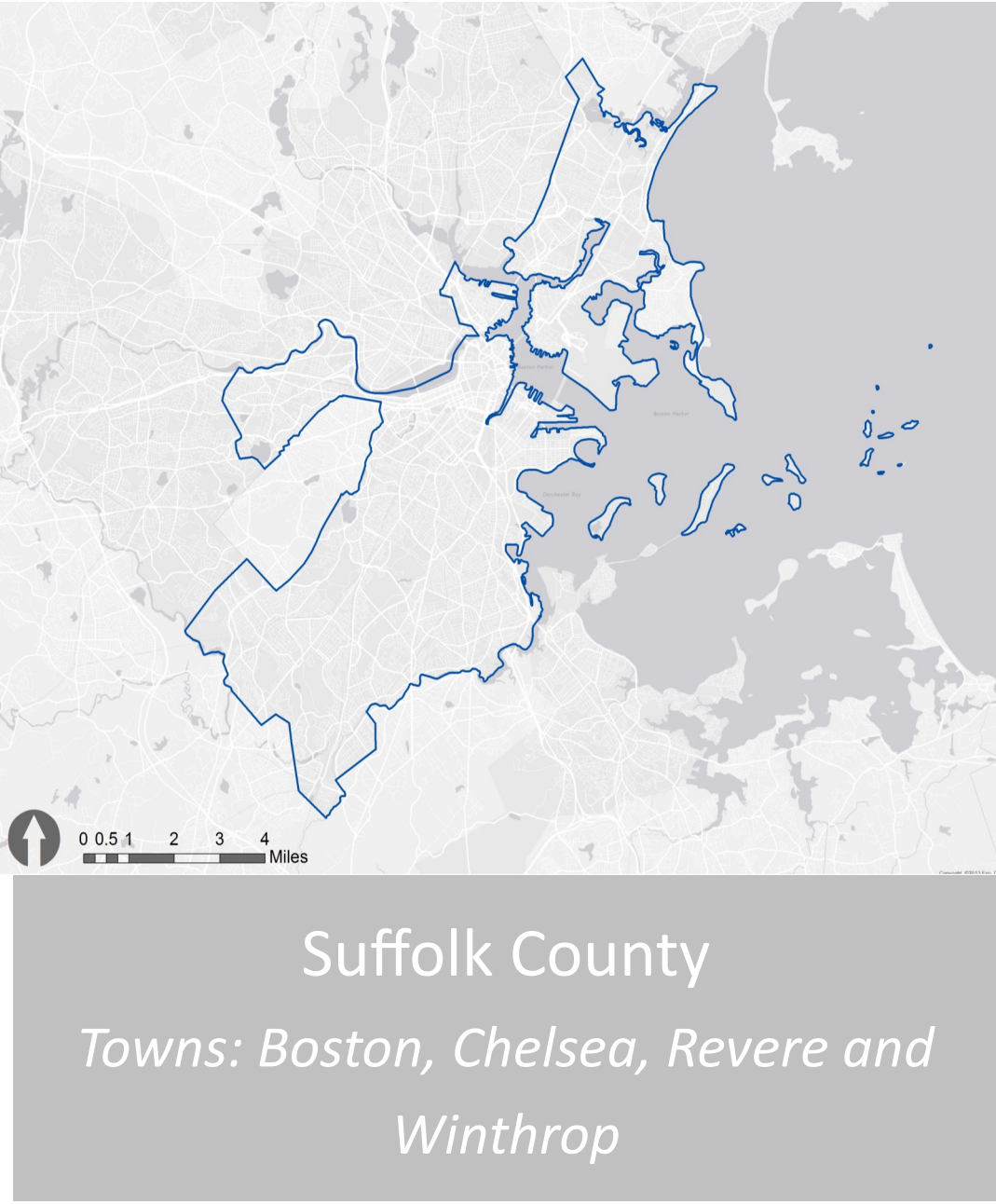
## Conclusion

I set out to see how farmers markets impacted food deserts, but given the relatively low percentage of food desert area in Suffolk County, I really ended up looking at whether farmers markets impacted food access. I thought it was particularly important given the efforts the state and community organizations were putting into getting EBT terminals at all markets for the use of SNAP benefits and implementing programs such as Boston Bounty Bucks, which is a dollar-for-dollar matching incentive for all SNAP purchases up to \$10. I wondered if the people wanting to use these benefits and who could be greatly impacted by the program were in fact taking advantage of these incentives given the moderate percent redemption of WIC and Senior Farmers Market Nutrition Program coupons that were being reported.

I hypothesized that the farmers markets in fact overlapped with already well served areas and did not fill in the gaps. My results showed that farmers markets did largely overlap with already well-served areas and did not fill in any noticeable gaps. However, I was surprised to see how many were serving low income census tracts.

While the number of markets in Massachusetts will likely continue to grow, avoiding oversaturation will require exploring new territory in order to provide farmers with expanded opportunities and achieve greater access for Suffolk County residents. Farmers markets typically spring up in well-established areas that get a lot of foot traffic and have the ability to sustain the businesses that attend, but perhaps a paradigm shift is needed to make farmers markets the catalysts for change. Markets should serve to bring communities together, furthering community organization and demonstrating an area’s desire and demand for fresh produce. Low access communities that sustain successful farmers markets will show other vendors and markets that there is a clear need for fresh and healthy choices.

Overall these results point to a solution worthy of discussion. Instead of too many farmers markets being a problem and a lack of food access being a problem, I see market expansion as being able to address multiple needs and requests at once. In acknowledging, however, that farmers markets are seasonal and affordability can sometimes be an issue, more permanent grocery options should be the long-term goal and additional purchasing bonuses and incentives should continue to be offered.



Suffolk County Statistics	
Number of geocoded grocery stores	291
Number of geocoded farmers markets	29
Population estimate (2012)	744,426
Population density, people per sq. mile (2010)	12,415.7
Percent below poverty line (2007-2011)	20.8%
Low-income tracts as percentage of all county census tracts (2010)	29.6%
Median household income (2007-2011)	\$51,638

**Cartographer:** Ellen Schramm  
**Date:** May 2, 2013  
**Sources:** 2010 Census, Federation of MA Farmers Markets, ReferenceUSA, City of Boston, 2007-2011 American Community Survey 5-Year Estimates, ESRI, USDA  
**Projection:** NAD 1983 State Plane Massachusetts Mainland FIPS 2001