

# Food Insecurity and Food Pantry Access in Boston and Cambridge, MA:

## Assessing Areas Most in Need of Food Pantries with More Accessible Hours of Operation

### Food Insecurity and Food Pantry Use

Nearly 12% of MA households were food insecure in 2011, meaning they did not have daily access to enough food for an active and healthy life for all household members. Since 2008, food insecurity in MA has risen over 40%.<sup>1</sup> Many food insecure households now regularly utilize food pantries as a way to supplement monthly food shortages.<sup>2</sup>

Households that receive SNAP benefits (Supplemental Nutrition Assistance Program, formerly known as Food Stamps) are among the most frequent clients of food pantries and often rely on food from food pantries once their benefits run out or to supplement limited SNAP benefits. Over half of SNAP benefit recipients visited a food pantry at least monthly over a six year time period in 2011.<sup>2</sup>

Food pantry clients are often the working poor. 83% of SNAP households have incomes at or below the poverty line even though over 30% of SNAP households reported earnings in 2011.<sup>3</sup> Households with members who are in the workforce still may need food assistance to meet household food needs.<sup>4</sup>

### Food Pantry-Client Areas of Need Index

I created an index to measure areas with clients most in need of food pantries with more accessible hours of operation, combining 2011 Census data on factors related to the need for food pantry services and the ability to access food pantry services during hours of operation:

- households receiving SNAP benefits
- SNAP households below the poverty line
- SNAP households with 2+ workers

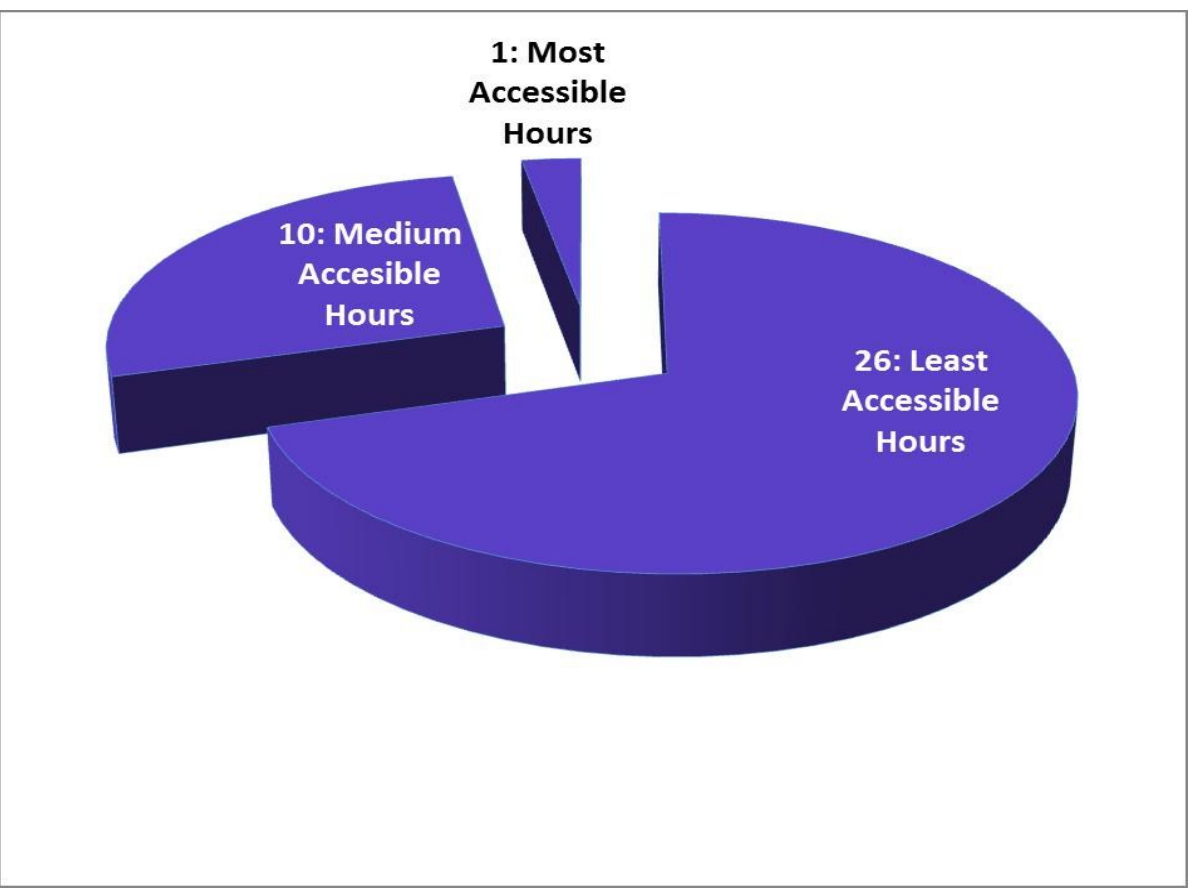
### Food Pantry Hours of Accessibility Index

Data on 37 Boston and Cambridge food pantries was collected and analyzed to create an index measuring food pantry service accessibility based on three categories:

- hours of operation on weekdays, 9 am– 5 pm
- hours of operation on weekdays, before 9 am or after 5 pm
- hours of operation on weekends

Food pantries with “Most Accessible Hours” have hours of operation in all three categories, whereas food pantries with “Least Accessible Hours” have hours of operation in only one category. Only one food pantry in Boston and Cambridge received a “Most Accessible Hours” rating. 26 Boston and Cambridge food pantries, or 70% of food pantries, received “Least Accessible Hours” ratings.

Food Pantry Accessibility Hours



### Major Techniques

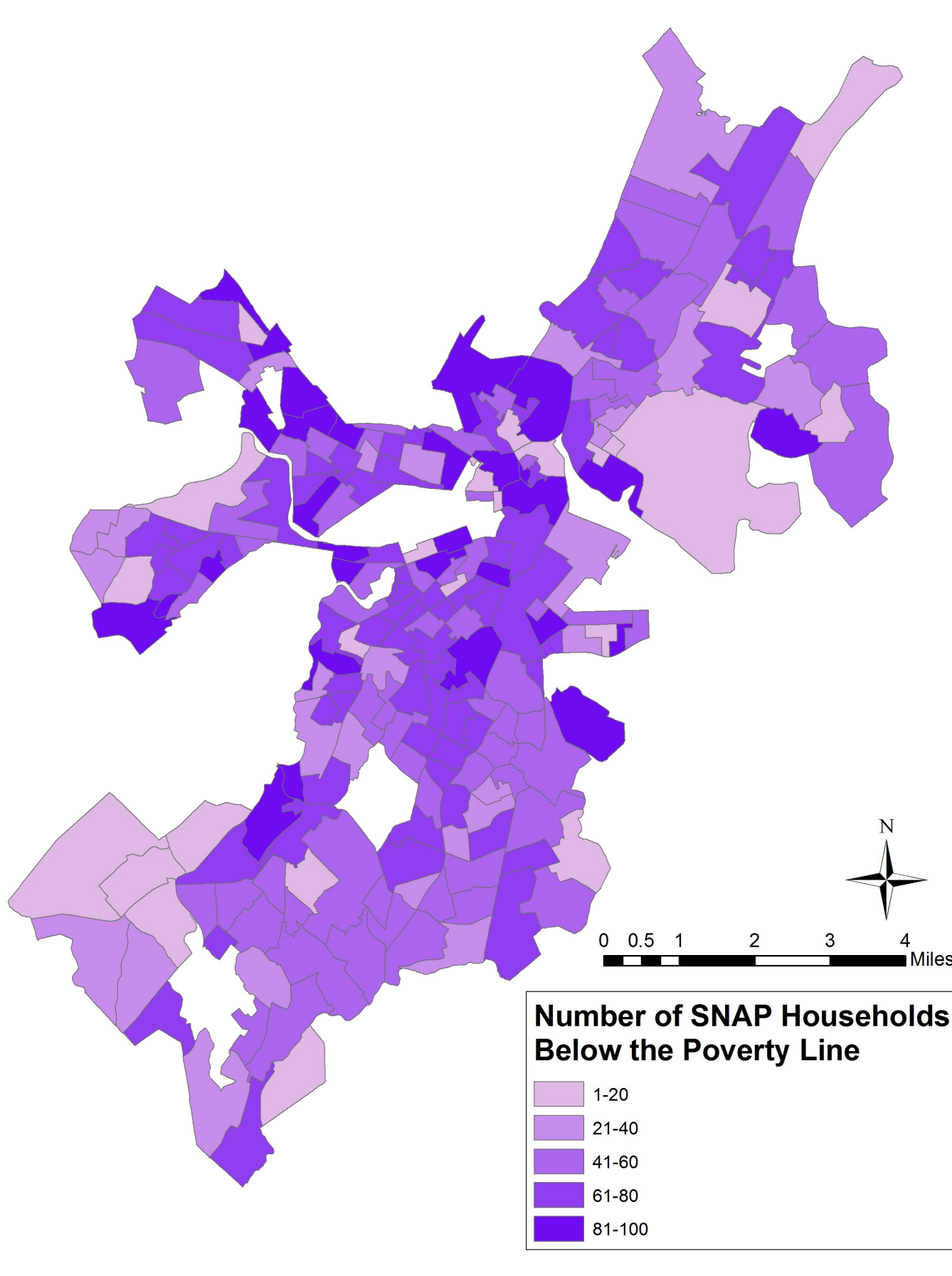
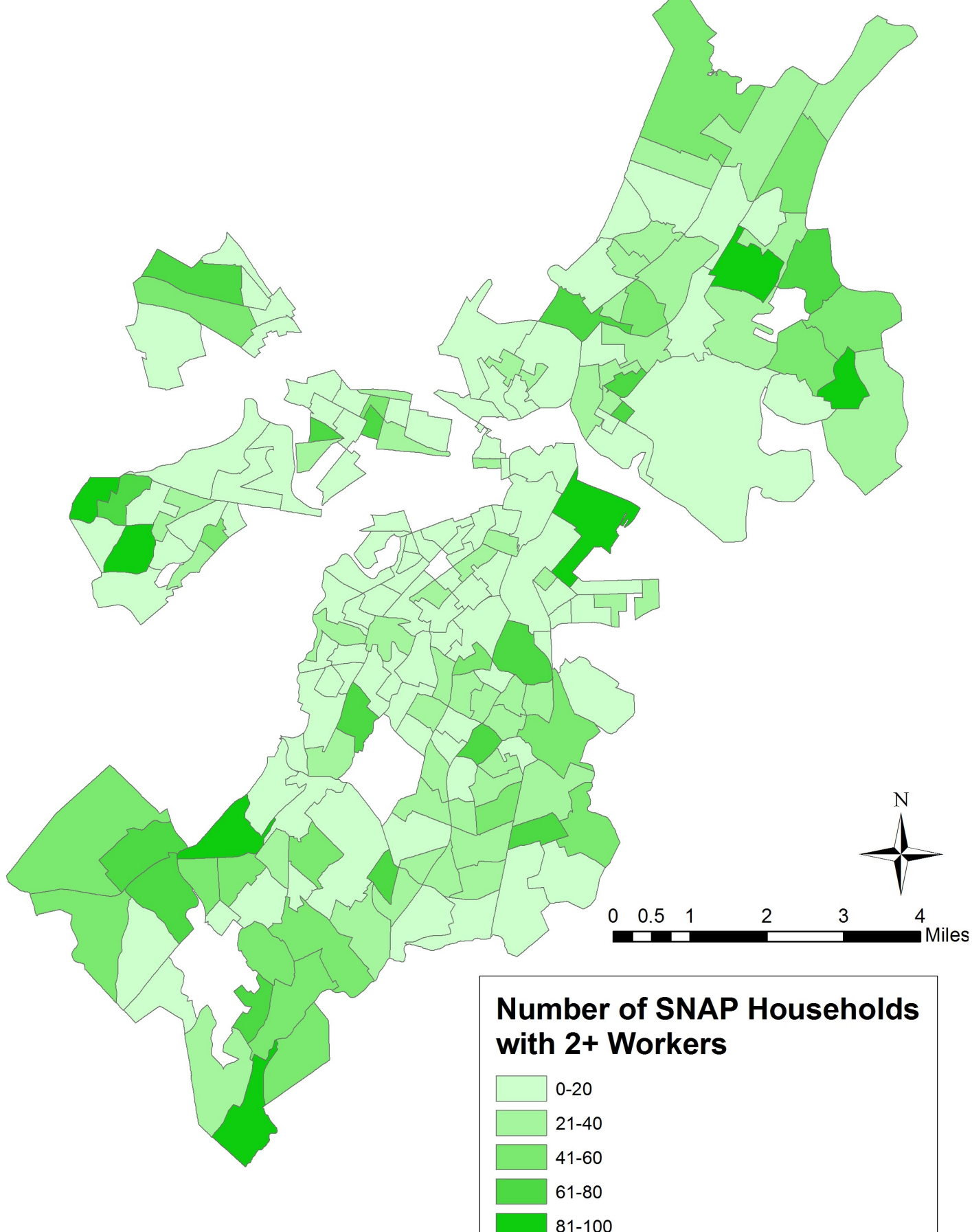
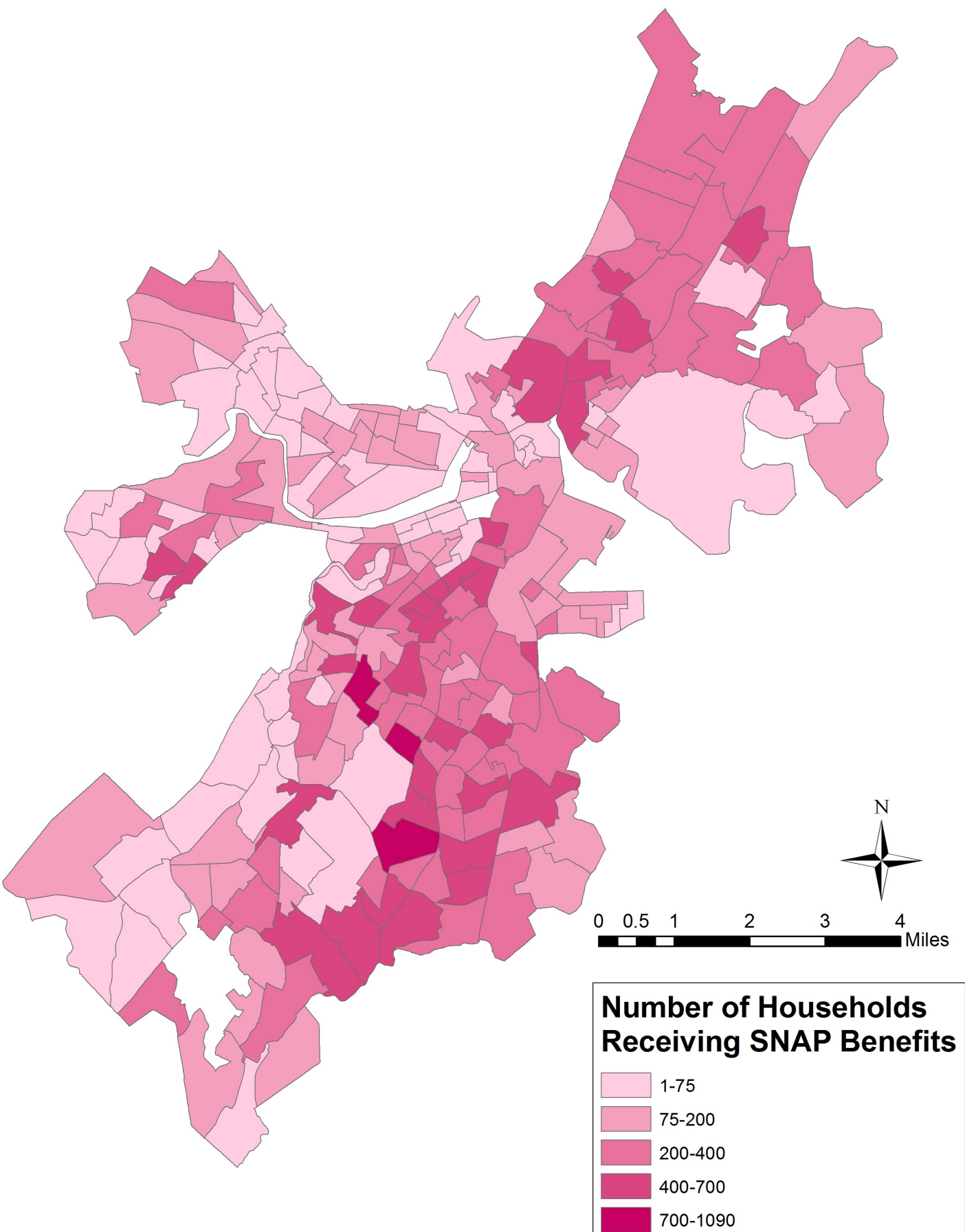
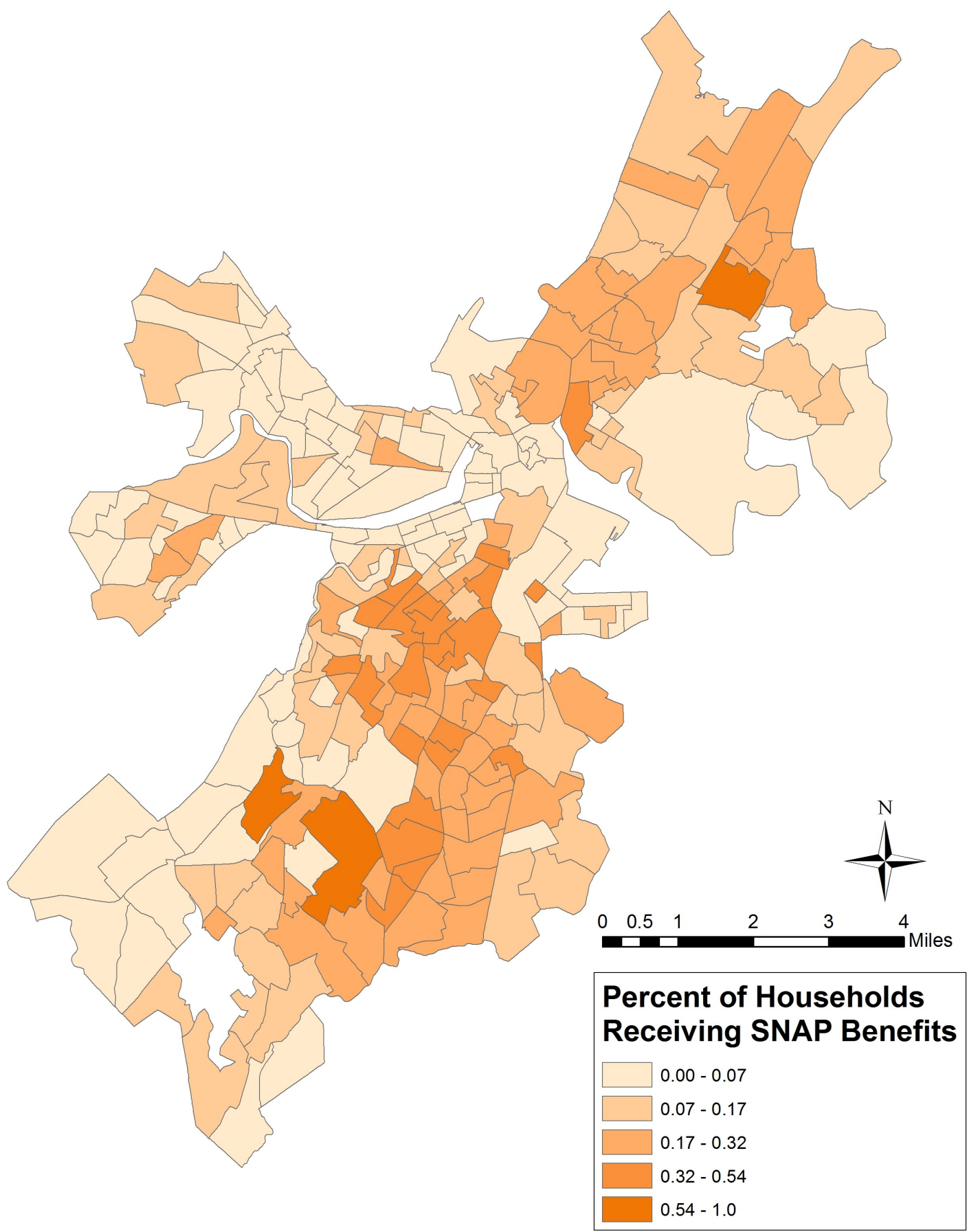
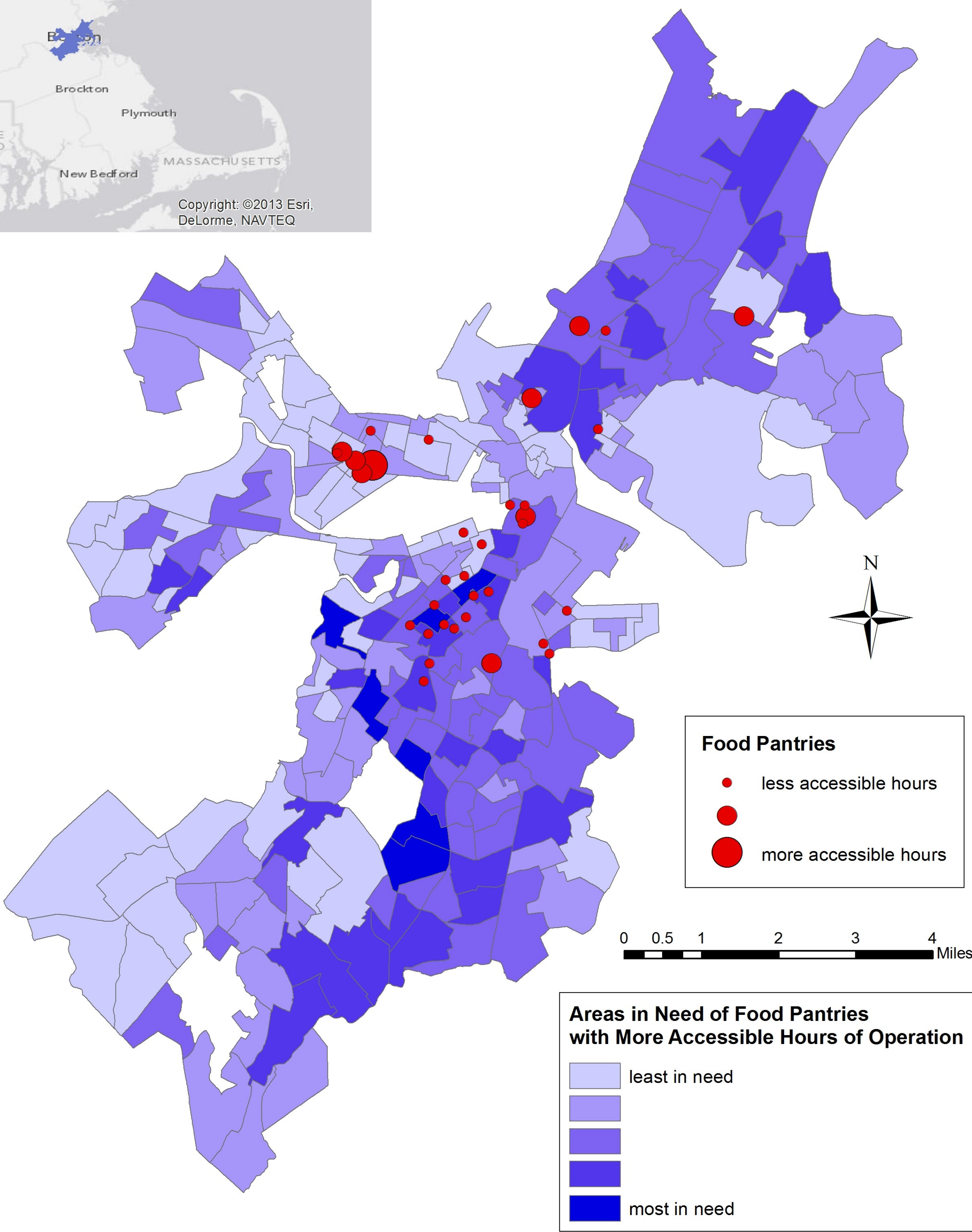
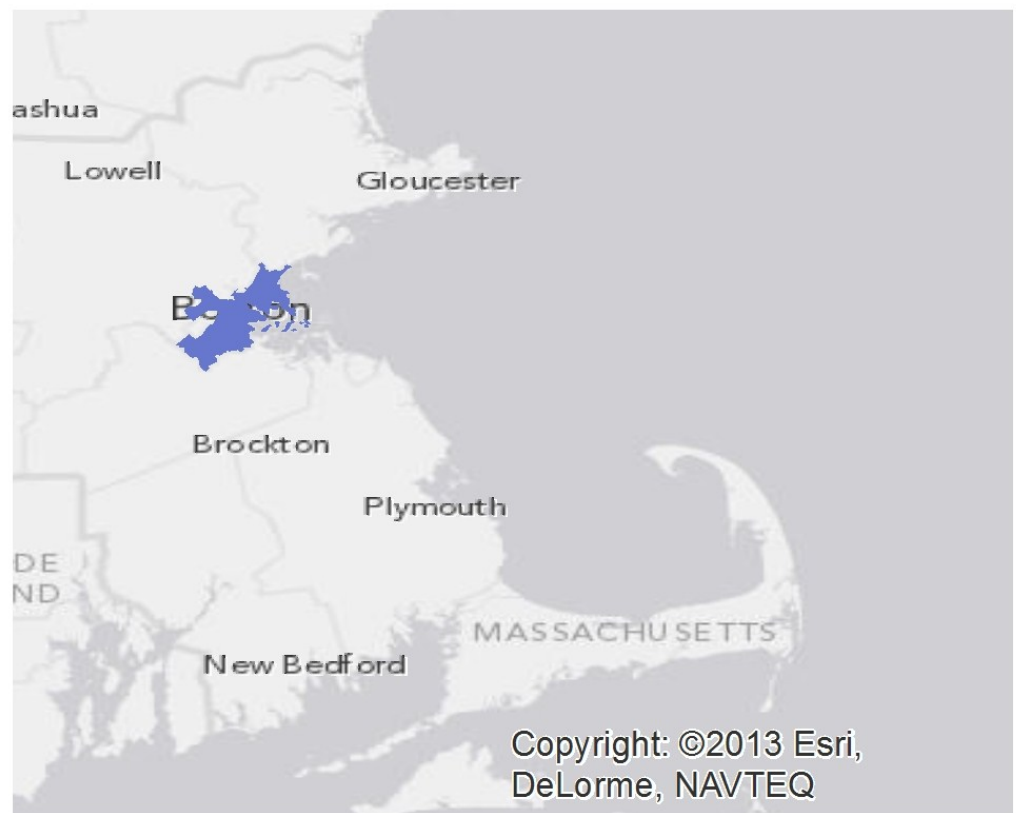
After reformatting and cleaning Census data and food pantry data and created the indices, I:

- added MA Census Tracts as a basemap
- joined Boston/Cambridge Census data to the basemap and kept only matching records to show Boston and Cambridge areas
- eliminated Census Tract data that overlapped with Boston area water features by excluding “land = 0” areas
- created individual choropleth maps based on factors in the “Food Pantry-Client Areas of Need” index
- geocoded food pantry addresses
- created food pantry symbols proportional to “Food Pantry Hours of Accessibility Index” scores
- created a master map that incorporated both indices

### Conclusion

Food pantries in Boston and Cambridge are most accessible to households that are able to utilize services between the hours of 9 am and 5 pm. The Revere, East Boston and Dorchester areas are most in need of food pantries with more accessible hours of operation. These areas are additionally challenged by being far from most food pantries, the majority of which are centrally located.

Existing food pantries could reach more clients in need by adding weekend hours of operation or weekday morning and evening hours. Additionally, development of new food pantries should be prioritized in less centrally located areas in Boston and Cambridge.



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Fundamentals of GIS

Coordinate System: GCS\_North\_American\_1983

Data Sources: The Greater Boston Food Bank Food Finder, WhyHunger, US Census, and the Tufts GIS Confluence

Citations:

1. Project Bread. *Status Report on Hunger 2012*. [http://www.projectbread.org/site/DocServer/12\\_100A\\_Status\\_Report\\_WebVersion\\_pdf.pdf?docID=7521](http://www.projectbread.org/site/DocServer/12_100A_Status_Report_WebVersion_pdf.pdf?docID=7521)
2. Feeding America. *Food Banks: Hunger's New Staple Preliminary Findings*. September, 2011. <http://feedingamerica.org/hunger-in-america/hunger-studies/~media/hunger-new-staple-exec-summm.aspx?pdf>
3. U.S. Department of Agriculture, Food and Nutrition Service. *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2011*. <http://www.fns.usda.gov/ora/menu/Published/snap/SNAPPartHH.htm>
4. Biggerstaff MA, Morris PM, Nichols-Casebolt A. Living on the edge: examination of people attending food pantries and soup kitchens. *Soc Work*. 2002;47:267–278.