

# Serving Justice (& Food) in the Greater Boston Area: Suitability Analysis of Fresh Truck Mobile Market Locations



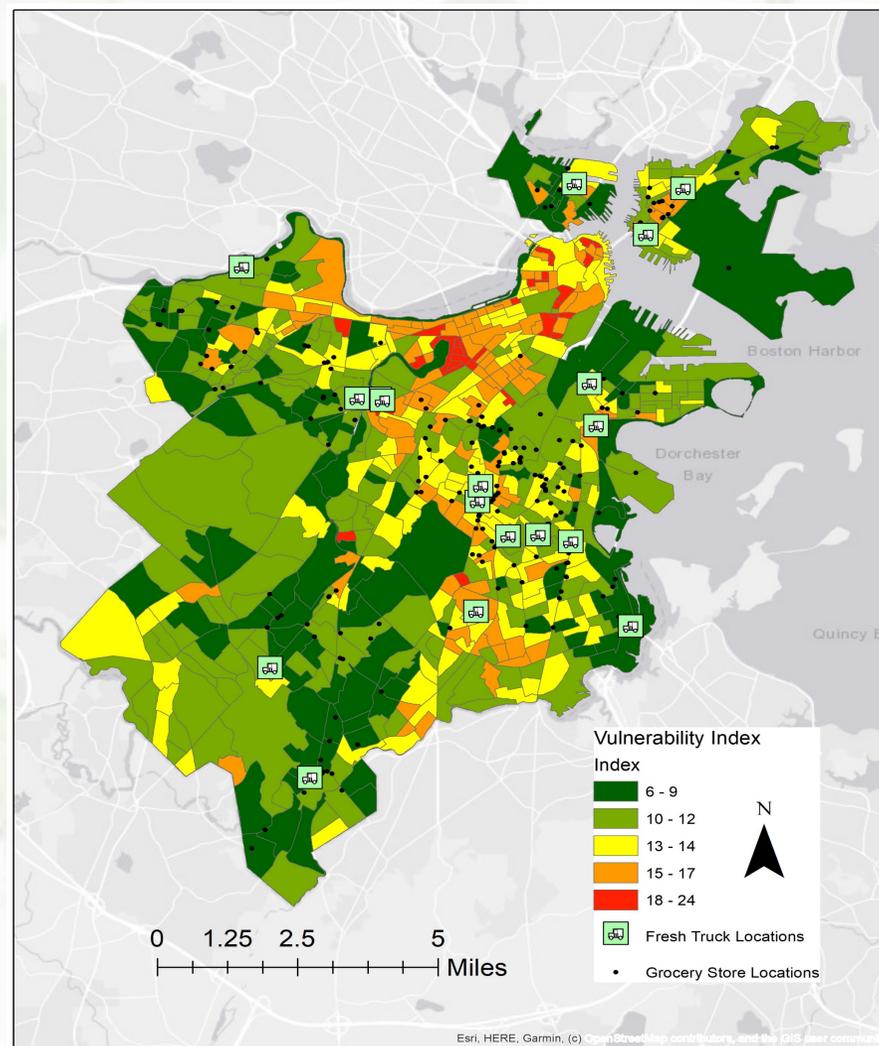
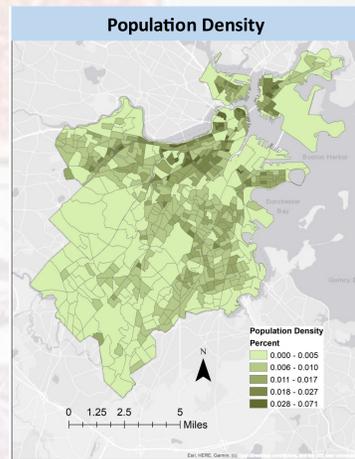
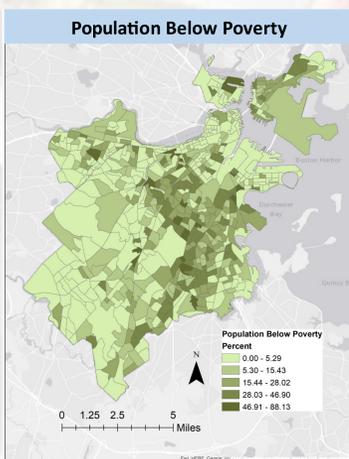
## Background

Access to health food is an important factor to sustain a healthy life, especially amongst low-income communities that have less access to food in general – both healthy and unhealthy foods. The disparities in access sprawl all over the world, with some countries experiencing more hardship relating to accessing food than others.

In Central Massachusetts alone, nearly half of communities have no food stores or only one few food store with heavily limited health foods available<sup>1</sup>. In efforts to increase availability of healthy food to the communities that lack options, “Fresh Truck” is a mobile market that travels to numerous locations within the Greater Boston area on a weekly basis all year round. Since Fresh Truck started in 2013, the number of annual transactions have increased significantly, from 1,376 the first year to 28,154 as of 2018<sup>2</sup>.

## Methods

This project was completed with data from Census Bureau, American FactFinder, and Fresh Truck Mobile Market. Inputs included location of truck stops and grocery stores, and demographic data for income, population, and number of cars owned per family. The tools used include Geocode Addresses, Reclass, Field Calculator, and Select by Attribute. The address of each stop and grocery store were geocoded to create a point of location on the map. Reclass was used to create five interval categories to represent the five percent ranges associated with each demographic in each block group. The final vulnerability map was created by using field calculator to add the reclassified values of each demographic.



## Results

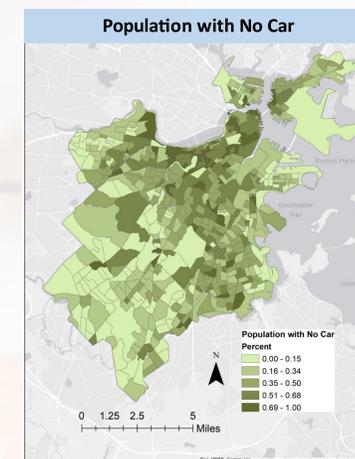
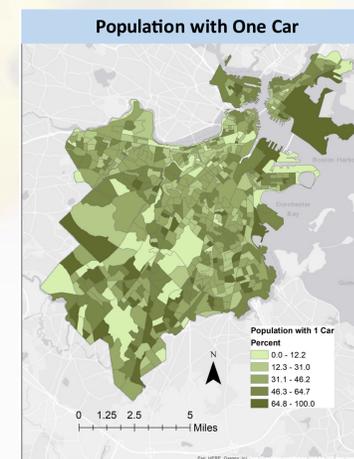
The results show that majority of the most vulnerable block groups are not located near a Fresh Truck Mobile Market stop or grocery store. The most vulnerable groups are those that have a high percentage of the population below poverty and do not own a car. Block groups with the highest vulnerability index, shown in red, represent areas with low-income, high population density and no car ownership.

The concentration of the most vulnerable groups without access to Fresh Truck stops and grocery stores are college students, with vulnerable non-college communities spread throughout. Communities with the lowest vulnerability index are situated with access to multiple grocery stores and more than one Fresh Truck stop located nearby. These are groups with at least one car, therefore the option to drive to different locations is possible.

## Conclusion

The Fresh Truck Mobile Market stops are suitably located to serve the communities with a high percentage of the population below poverty. The stops are also located to best serve the populations with no car, however fail to include college students with no cars and limited access to grocery stores. The areas of high population density are have relatively low numbers of grocery stores nearby, and do not have a Fresh Truck stop located within. These areas are namely college students, thus they have access to on-campus food options or shuttle transit provided by the University.

Overall, Fresh Truck Mobile Market best serves the low-income communities that have less access to food than other communities.



## Sources and References

<sup>1</sup> Olendzki, Barbara C., et al. “Disparities in Access to Healthy and Unhealthy Foods in Central Massachusetts: Implications for Public Health Policy.” *Journal of the American College of Nutrition*, vol. 34, no. 2, 2015, pp. 150–158., doi:10.1080/07315724.2014.917058.

<sup>2</sup> Fresh Truck. Fresh Truck Annual Report. 2018, pp. 1–20, Fresh Truck Annual Report

Sources: Census Bureau, American FactFinder, Reference USA

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