

Community Health and Nutrition Hubs in Boston

Identifying sites for centralized and integrated primary care service and local healthy food access in the City of Boston

Project Overview

Goal: This model will serve as a tool for policy makers to determine target areas for creating 'community health and nutrition hubs'. Target areas are defined as locations where there is a pre-existing community health center (CHC) within a 0.8 km radius of a pre-existing farmers market, with preference toward locations in environmental justice census blocks with high population densities.

Rationale: The link between health care and proper nutrition is a growing topic of concern to the extent that we are now seeing doctors formally prescribe healthy food to patients. Simultaneously, many people have difficulty accessing healthy, affordable food due to factors including geographic, time, and economic constraints. Many parties are working to bridge the gap between health care and access to good nutrition. Simultaneously, farmers markets are being promoted as important market venues for bolstering healthy and sustainable regional food systems. This model explores the potential to further integrate the overlapping goals of health care institutions and the regional food system. By identifying the geographic confluence of existing CHCs and farmers markets in Boston, especially in high density 'environmental justice' neighborhoods, policy makers and stakeholders can work to develop integrated, accessible and centralized community health and nutrition hubs with minimal physical investment.

Methodology

The area of interest for this project is the City of Boston. Datalayers from MassGIS are used to display the topography of Boston and the surrounding towns. The Boston farmers' markets locations are displayed with the CHC layer. Using 0.8km distance as an estimation of walkable distance, the farmers markets within a buffer zone of a 0.8km radius of CHCs are identified.



All locations identified are considered potential community health and nutrition hubs. These locations are further prioritized according to those that exist within an environmental justice (EJ) census block group. The MassGIS EJ layer identifies

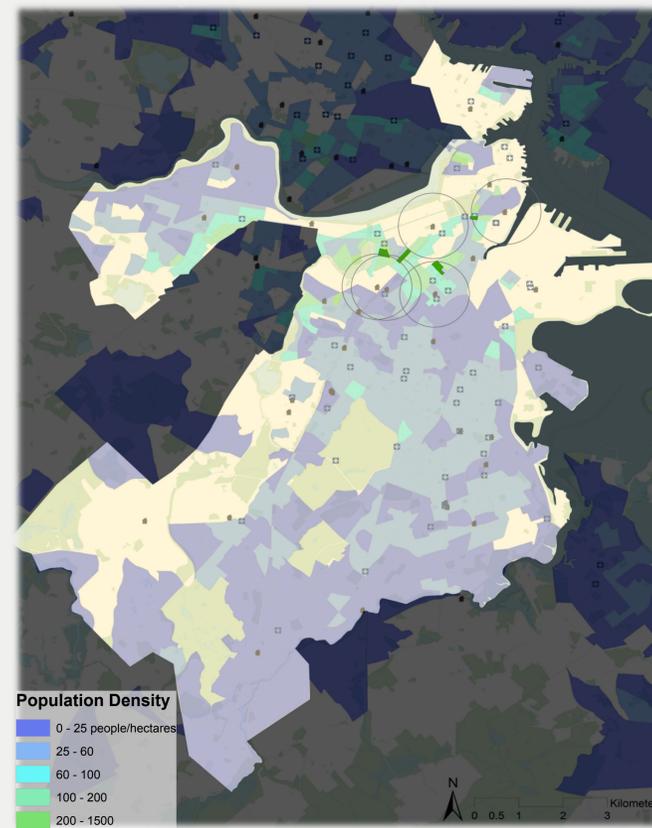
three demographic determinants of an EJ block group: high minority, low English, low income. Those block groups that have all three features are considered highest priority for a potential community health and nutrition hub location. Finally, locations will be given further priority if they are located within a high population density block group.



Limitations

Walkability with 0.8km is determined using Euclidian distance, which does not fully capture walkability and does not fully express true convenience- there are many factors outside the model that determine convenience. The EJ layer is used as proxy for populations with the highest need for hubs; data on the health and nutrition status of residents, or the healthy food accessibility status of residents was not acquired. Similarly, the highest population density locations are used as an expression of highest potential use. In reality, many other factors determine high program use. Finally, this project does not assumed that data within a given block group is evenly distributed and clipped block groups are not interpreted as such.

Target Locations: High population density and environmental justice block groups located proximal to CHCs and farmers' markets



*Green highlight: block group segments within 0.8km buffer of farmers' markets and CHC (circles), category 3 EJ block groups (see middle map) and highest population density category. All CHCs and farmers markets within these buffers are the final target locations.

Conclusions

This model identified four block group segments that had all the high priority features defined in the project design. There are seven community health centers and five farmers markets within 0.8km of these locations. The next step in implementation would be to contact the City of Boston to inquire about funding opportunities, as well as the farmers' market managers and relevant community health centers to gauge interest, will, funding and potential management structures.

Community health centers to contact include:

- Whittier Street Health Center
- Boston Health Care for the Homeless Program
- SECHC at Dr. Solomon Carter Fuller Mental Health Center
- South End Community Health Center South End Associates
- Sidney Borum Jr. Community Health Center
- St. Francis House Clinic
- South Street Center

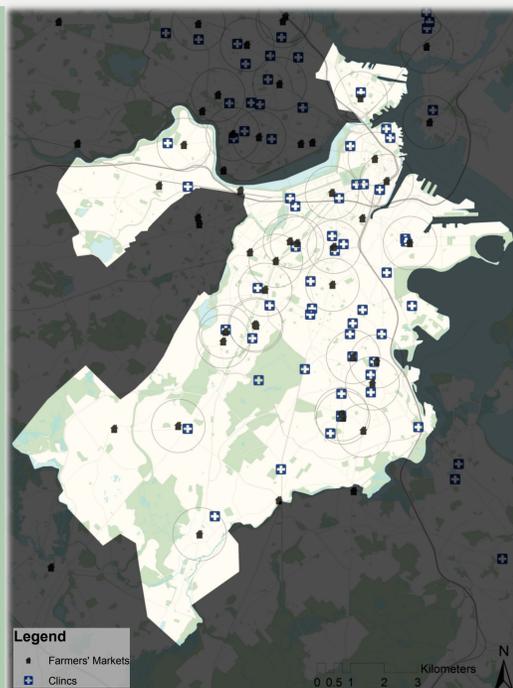


Farmers' markets to contact include:

- Orleans Winter
- Copley Square
- Dewey Square
- Boston Medical Center
- Northeastern University

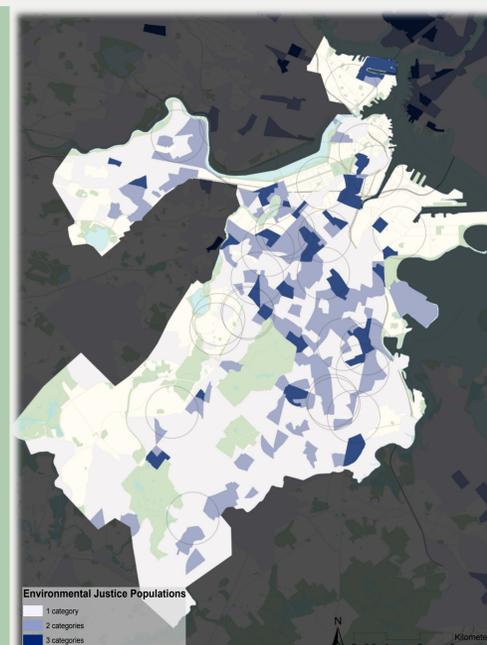


Farmers' Markets and CHCs



*Circles= indicate that there is at most a 0.8km radius between a farmers market and CHC; these are target locations phase 1.

Highest Need Locations



*Darkened block groups= contain all three EJ features; these are target locations phase 2. This new data will inform the target locations identified in the population density map (see map to the right).

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Map Projection: Massachusetts State Plane Mainland Projection.

Data Source: Executive Office of Energy and Environmental Affairs' GIS, 2010; Massachusetts Dept. of Agricultural Resources, 2014; Massachusetts Dept. of Public Health Bureau of Environmental Health.

Citations:

Amuda, Aisha. Boston Farmers' Market Incentive Programs: Increasing Access to Fresh and Local Produce. The Food Project, February 2011.

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