

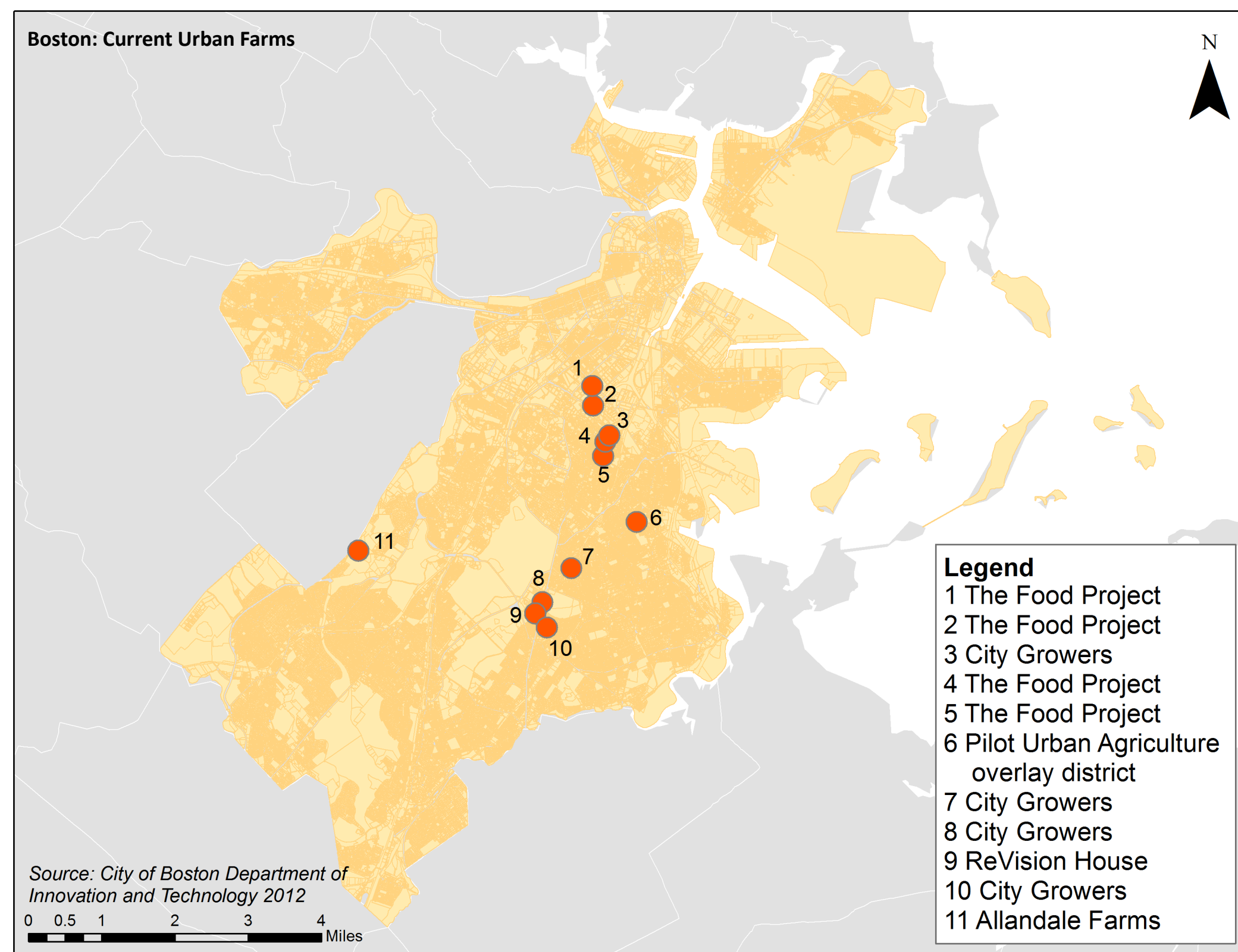
# Urban Farming in Boston: A Survey of Opportunities

## The Project



The City of Boston's Mayor's Office of Food Initiatives' mission is to increase access to fresh local food, and the ability to produce that food within city limits. In support of this, the Trust for Public Land, in conjunction with the Tufts Urban and Environmental Policy and Planning Department sponsored a team of graduate students to conduct a vacant land assessment for the city of Boston for use in urban agriculture.

Urban agriculture in this study is defined as the use of a lot for the cultivation of food in raised beds on the ground plane with the purpose of generating profit. This study is focused on ground-based farming.



## Criteria

The outcome of a literature review of existing land assessments in Portland, Vancouver, and Seattle, among others, as well as interviews with 11 regional farmers and urban farming advocates determined the criteria for this land assessment:

Criteria	
10, 000 square feet or more	Medium-sized; smallest acreage for profitability of a commercial farm. <sup>1</sup>
20% slope or less	Reflects desire to farm on level land; accommodates farmers comfortable with terracing
Light Exposure	8-10 hours of south-facing sunlight

Additionally, water access, soil, security and accessibility were identified as important considerations which came into play later in the assessment.

## Methodology

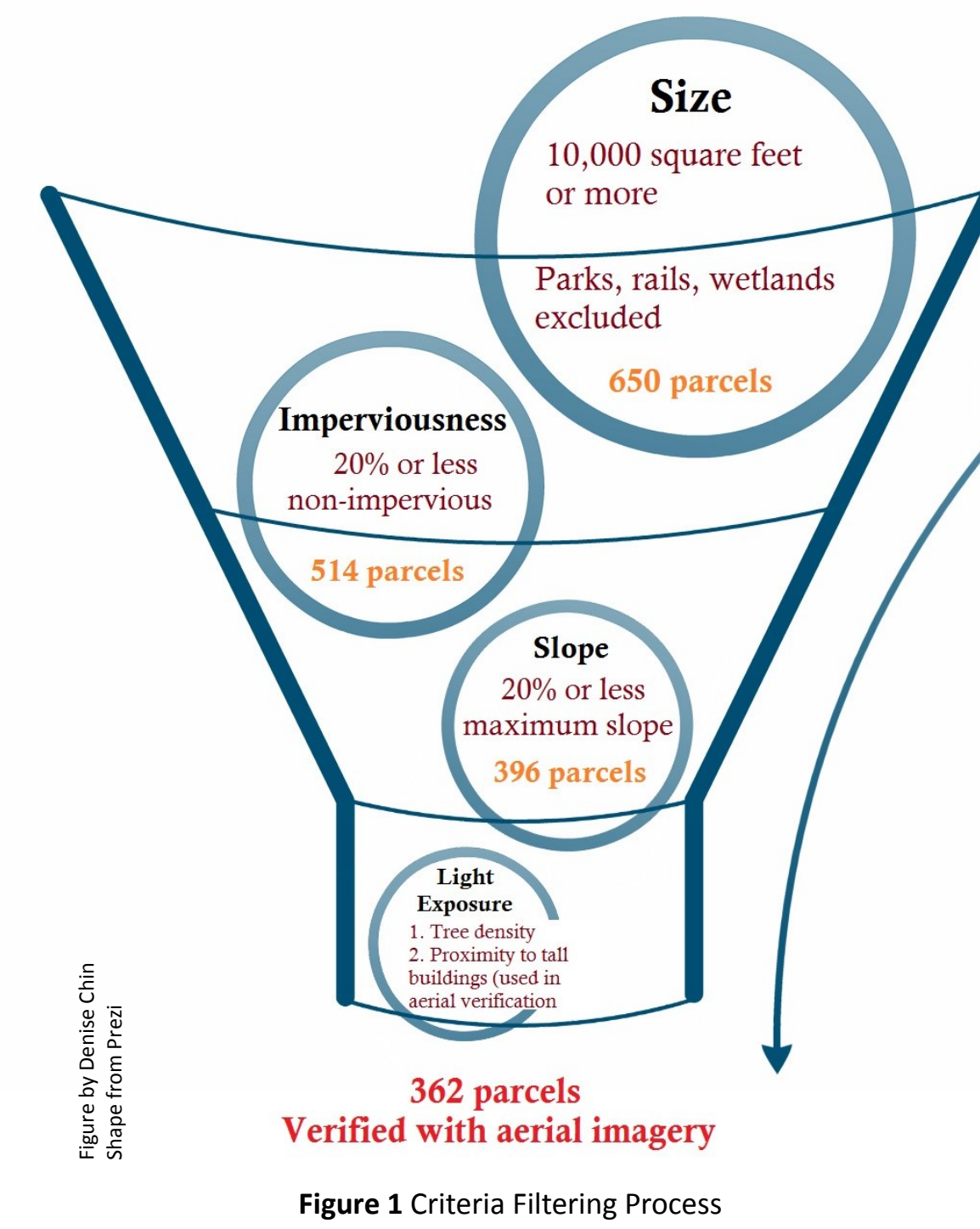
Vacant land was identified as parcels without buildings.

### 10, 000 square feet or more

Parcels were sorted by size using data from the City of Boston Assessing Department's Property Parcel Data.

### Exclusion of open space, rails, wetlands

Open spaces and parks were not considered in this assessment. Similarly, vacant parcels along rail lines and wetlands were excluded. Parcels that intersected with open space, rail and wetland polygons were excluded using the select by location tool.



### Imperviousness

Large industrial sites, docks, airport runways, highways and parking lots matched our definition of 'vacant' although they are not appropriate for urban agriculture. Parcels more than greater than 20% or less non-impervious were excluded using the erase tool.

### 20% slope or less

Using the digital elevation model (DEM) of Boston, a slope raster layer was created. By creating a zonal statistics table, parcels with a maximum of 20% slope or more were excluded.

### Light Exposure

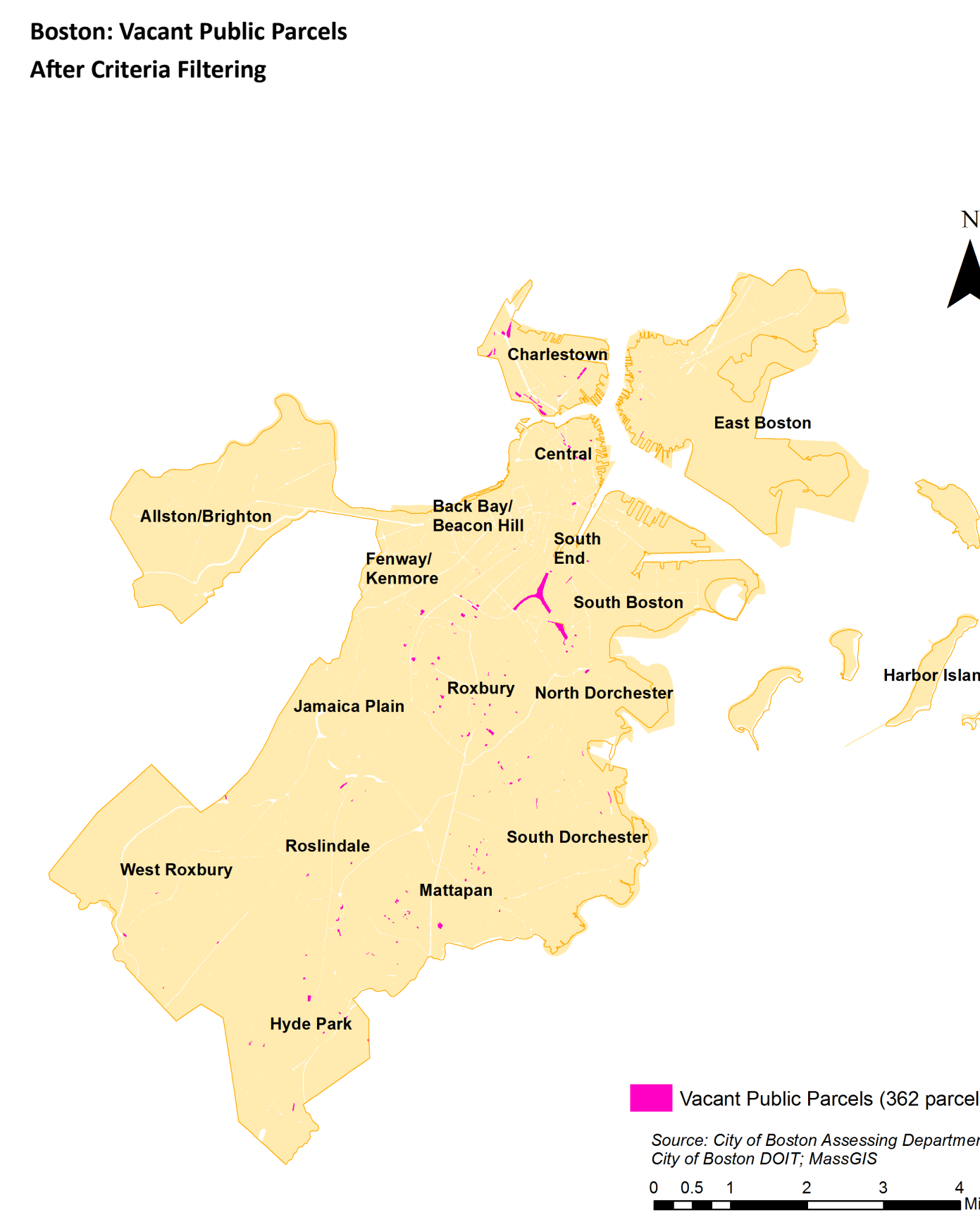
The measure for light exposure was operationalized in two different ways: tree density and proximity of tall buildings to parcels.

#### Tree density

Parcels with more than 5 trees per 10,000 square feet were filtered out from the database.

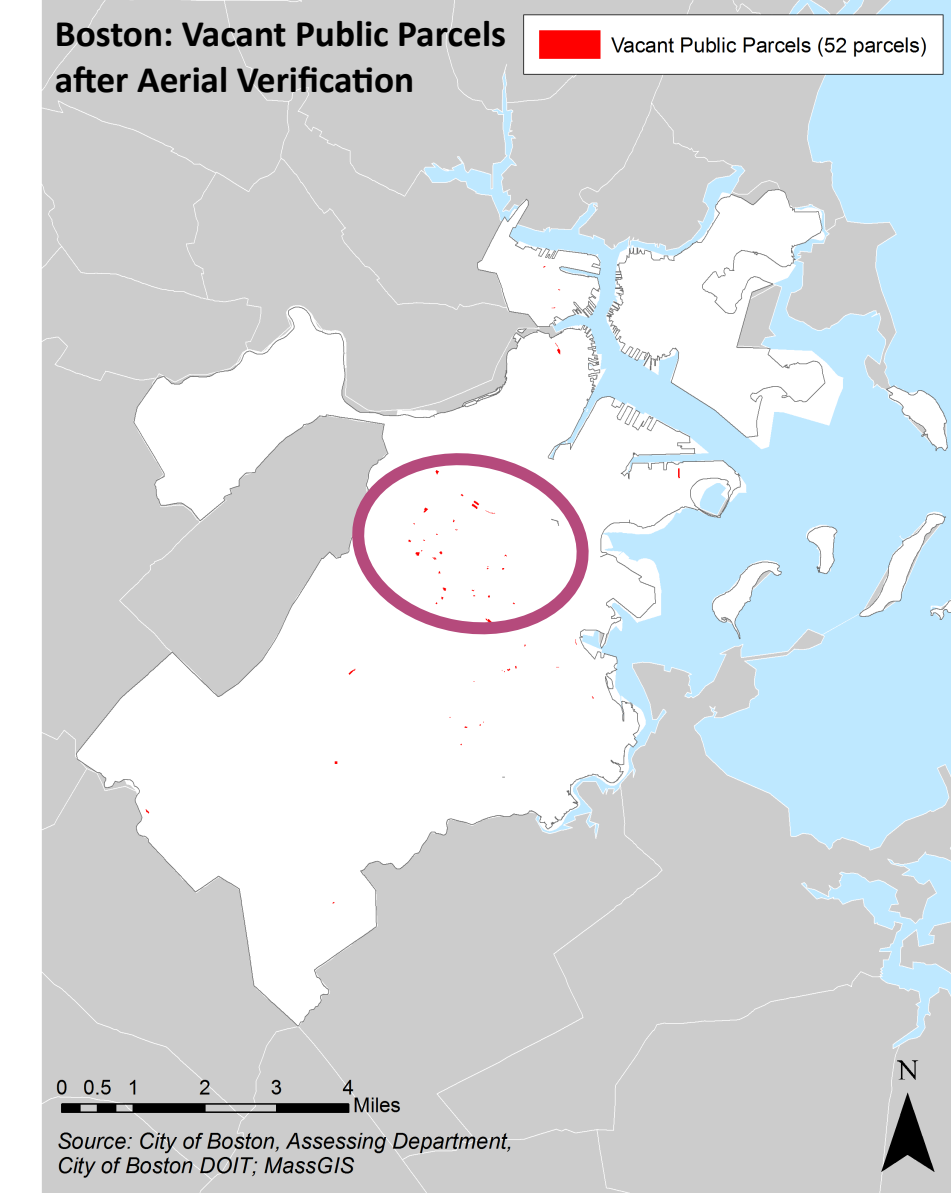
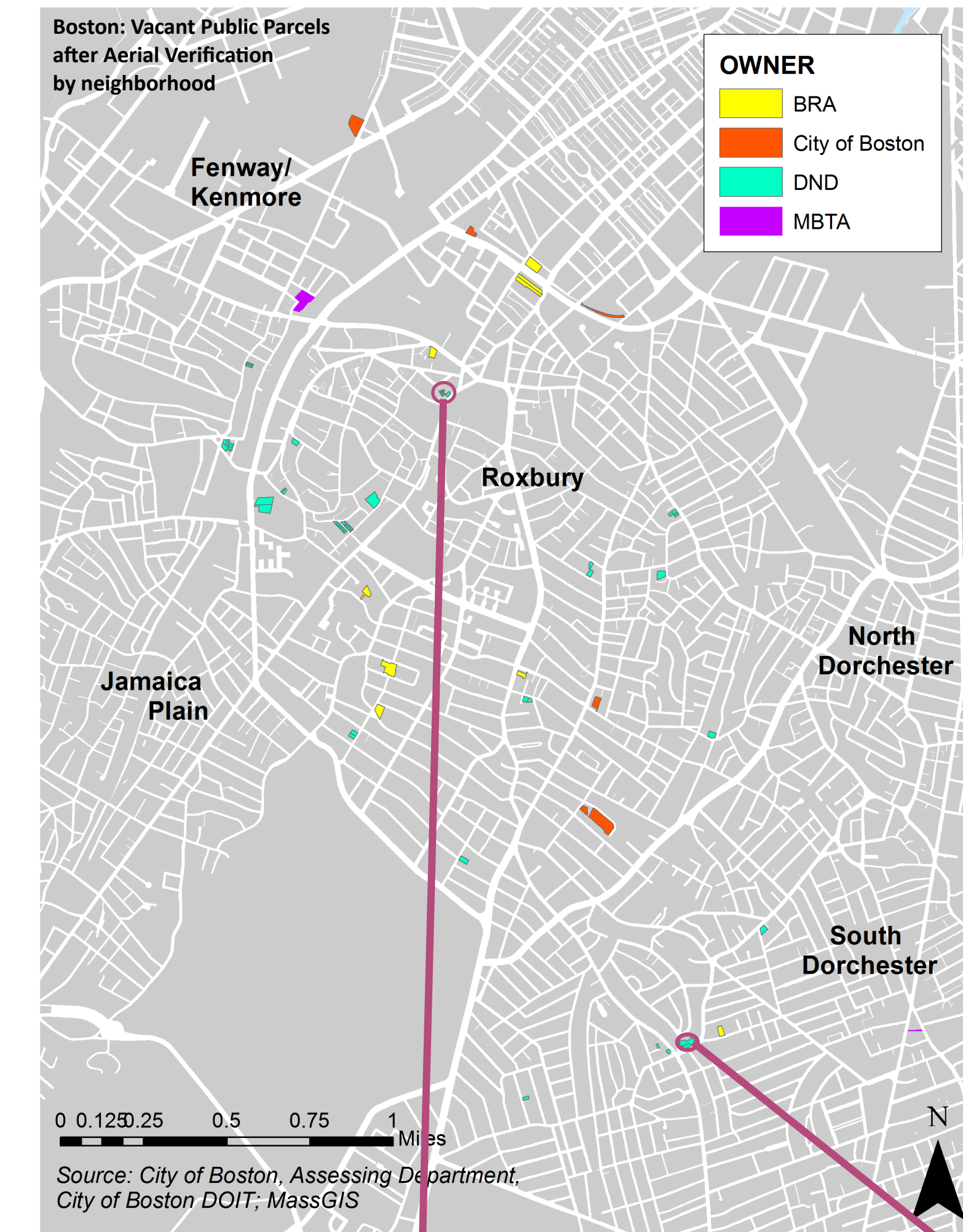
#### Proximity to tall buildings

A layer of buildings 40 feet or taller within an 80-foot vicinity was created and used during the aerial verification process.



## Conclusions

The application of the above criteria determined 362 public parcels suitable for urban agriculture. These sites were then verified with aerial imagery and narrowed down to 52 parcels.



These sites were "ground truthed" (physically visited by the team). 10 of the top scoring sites were profiled in the final project report.



Top-scoring parcel in Roxbury



Top-scoring parcel in Dorchester

This vacant land assessment revealed that over 8000 acres of vacant land with 5800 acres under public ownership exists in Boston, implying the wealth of opportunities for urban agriculture in the city.

Denise Chin | May 2013  
UEP 232 Introduction to GIS  
In conjunction with UEP 255 Field Projects: Planning and Practice  
Project team members Tida Infahsaeng, Ian Jakus and Valerie Oorthuys  
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Projection  
NAD\_1983\_StatePlane\_Massachusetts\_Mainland\_FIPS\_2001\_Feet



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<sup>1</sup>City of Boston's Urban Agriculture Rezoning Initiative Draft Article 89