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.

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.

Imperiousness 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-feet vicinity was created and used during the aerial verification process.

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.