

Urban Farming in Boston: A Survey of Opportunities

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The city of Boston has recently made strides to prioritize food issues, an effort centering on the Boston Redevelopment Authority's citywide urban agriculture rezoning initiative. But, to plan for this new direction (and to ensure that it would win support), city officials and urban advocates recognized that residents and stakeholders would have to be much more aware that vacant public land suitable for farming is in fact available within city limits. Convened in spring 2013 by the Trust for Public Land (TPL), which had been working closely with municipal officials and their allies, a team of master's-level graduate students from Tufts University's Department of Urban and Environmental Policy and Planning (UEP) took on the task of demonstrating that the city of Boston is home to a number of vacant properties well-suited to urban farming and agricultural training.

In conducting a suitability analysis, the UEP project team was asked to respect several boundaries. The team was to avoid disrupting or pre-empting an upcoming set of community meetings focused on the rezoning initiative, and the team's study was to take an objective look at vacant land – that is, anchored by strong quantitative data. In response, the team developed a customized process for assessing the potential for urban farming, focusing on stakeholder input, accessible results and replicability. Overall, the goal was to provide a comprehensive, on-the-ground look at sites at which urban agriculture could take place, and to develop a framework and tools supporting further analysis and implementation.

Scoping of the project began with a thorough review of prior studies that looked at the suitability of urban agriculture in other cities. But, rather than rely on criteria from these studies, the team interviewed local urban farmers, urban farming advocates and planning professionals in order to develop a set of suitability criteria. In view of the high price of land in Boston and the substantial startup costs facing small urban farmers, it quickly became clear that public landowners – such as the city's Department of Neighborhood Development (DND) – would need to play a significant role in land disposition and preparation. Based on its analysis, the team determined that commercial farms of more than 10,000 square feet located on publicly owned vacant parcels represented the "sweet spot" in terms of what would work economically. Criteria were also established to identify ideal farming conditions. These included such basics as availability of sunlight, absence of trees, and favorable slope, as well as secondary concerns like street lighting (for safety), accessibility, and favorably situated abutters.

Application of the criteria required an innovative multi-stage filtration process designed to pinpoint the sites most likely to be suitable for farming. (At key points in the process, the UEP team created data sets to allow end users, if they desired, to customize these criteria in order to address their particular needs and interests.)

To start out, recent data from the city's Assessing Department was cleaned; then, with the help of Microsoft Access, vacancy, ownership and size criteria were folded in. Right away, a challenging technical issue arose – potential agricultural land owned by the city's DND was being excluded. The

reason: the DND land consisted of many small contiguous parcels that the software deemed to be under the 10,000 square-foot threshold. To solve the problem, the team consolidated these small tracts into single, larger sites, taking advantage of the geoprocessing capability of Arc GIS. Geoprocessing was also used to filter out park land and rail parcels, as well as tracts that were wooded, had a steep slope, or were covered with impervious surface.

The final components of the analysis were, first, aerial verification and scoring, and, second, “groundtruthing” – that is, paying a personal visit to the most promising lots. By putting “eyes on the sites,” the UEP team was able to maintain a high level of quality control. In drawing on aerial orthophotos, it was possible to reach accurate conclusions about light exposure levels on individual parcels, as well as to visually assess sites for density of vegetation and presence of debris. This approach also served to confirm the vacant status of the land. By generating a score – 0 for not vacant, up to 8, for most suitable – varying sets of parcels can be selected for examination, depending on the requirements of the end user. For the final step, groundtruthing, the UEP project team itself chose parcels with a score of 6 or greater. In addition, at this stage, the team created a separate scoring rubric making it easier for community-based organizations to conduct their own ground-level assessments. These criteria included such secondary factors as number of abutters, accessibility, and lighting. The team’s final report included brief profiles of 10 of the 56 top scoring sites, further demonstrating the applicability of the chosen methodology.

The project effectively demonstrated to stakeholders that substantial farmable land is available in Boston. The team identified 717 acres of publicly owned vacant land meeting the size criteria. Of these, at least 100 acres are believed to be suitable for farming. This knowledge has substantially advanced the goals of urban agriculture initiatives in the city. The Trust for Public Land, in collaboration with municipal government, the Urban Farming Institute, and Dudley Neighbors, Inc., is working to acquire publicly owned vacant lots in historically underserved areas for conversion to urban farms. The Mayor’s Office of Food Initiatives has formed a cross-departmental committee using the UEP team’s data and analytic methods as the basis for selecting urban farmland and establishing urban agriculture policies. The Department of Neighborhood Development plans to dispose of selected parcels based on the data and results of the team’s efforts. Two AmeriCorps VISTA service members are working on developing permitting requirements and designing a request for proposals that will further promote commercial urban agriculture throughout the city of Boston.

URL of complete project report:

http://ase.tufts.edu/uep/degrees/field_project_reports/2013/Team_8_Final_Report_2013.pdf