

# Growing Urban



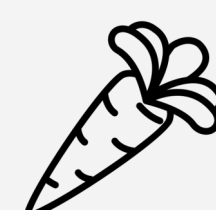
## A suitability analysis for future community gardens in Somerville, MA



### INTRODUCTION

It is no surprise that Somerville is lacking in green and open space. 77% of Somerville is impervious surface, while only 6.5% of the city is considered open space. This is not, however, due to lack of want. Green and open space are important to the residents of the city, as is urban agriculture. Demonstrating this, Somerville was the first city in New England to pass an Urban Agriculture Ordinance with goals to teach residents how to grow food successfully in the city. With the precedent set and interest clear, Somerville could use more community gardens. One of the biggest challenges the city faces with community gardens is lack of available space for new gardeners.

11 Active Community Gardens



225 Individual Plots



>200 Names on Waiting List



2 Years Average Wait Time



### METHODS

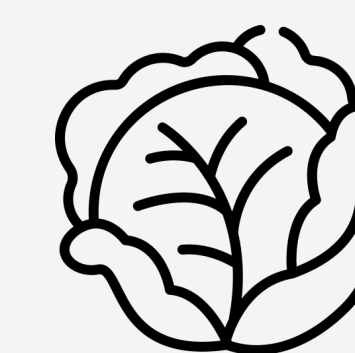
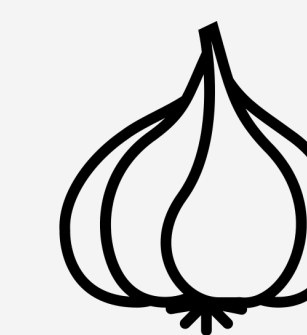
Ideally, a community garden would be within walking distance to public elementary and secondary schools and public transit, with preference to lots farther away from grocery stores and pre-existing community gardens. The latter two variables should not exclude parcels from consideration but for this analysis are considered less suitable. For the proximity portion of the analysis, 1/4 mile buffers were placed around all these variable locations. A 1/4 mile is generally considered to be a five-minute walk. No buffers were included in the final map for proximity to public transit, as all of Somerville is within a quarter mile proximity to MBTA bus stops. A garden would also ideally serve areas of the city deemed most vulnerable to environmental justice issues.

Vacant parcel eligibility was done case by case. Lots such as parks with playgrounds, and strips immediately adjacent to railroads with no space for any sort of buffer were excluded. Lots considered eligible but may require further research to determine their importance to the community and vet safety concerns include sports fields, parking lots, spaces near major roads and rails, and the Kiley Barrel brownfield lots located outside of Union Square. Parcel information was compared against aerial imagery to determine eligibility.

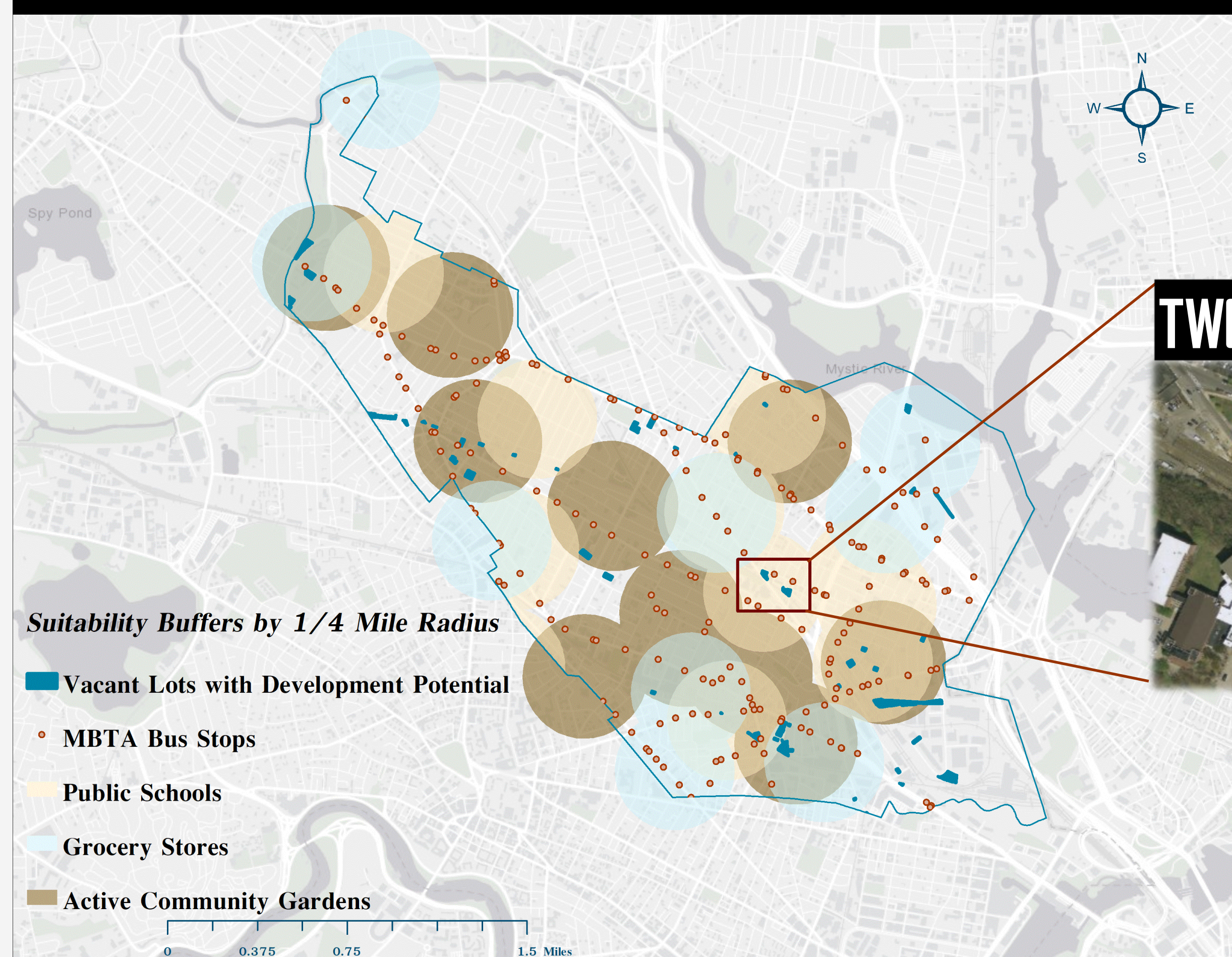
Slope was considered with intentions of excluding vacant lots located on slopes of greater than 20% as this is seen as the threshold after which extensive erosion control would be necessary. Water access is not shown as Somerville is a heavily urbanized area with widespread water access.

### RESULTS

Of the limited vacant parcels in Somerville, only two were identified as most suitable from this analysis. These areas are towards the eastern part of the city in environmental justice zones, within walking distance to public schools and public transit while outside of the buffer zones surrounding existing community gardens and grocery stores. As these areas are very close to each other, the city might consider utilizing both of these lots as connected growing space, similar to how South Street farmsites 1 and 2 are used.



### SUITABLE PARCELS BY PROXIMITY

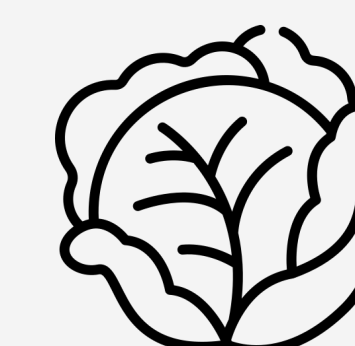
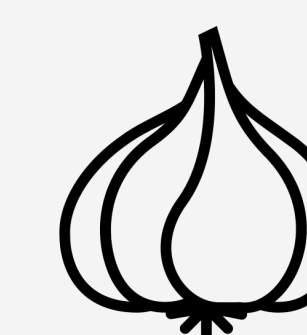


### TWO KEY PARCELS

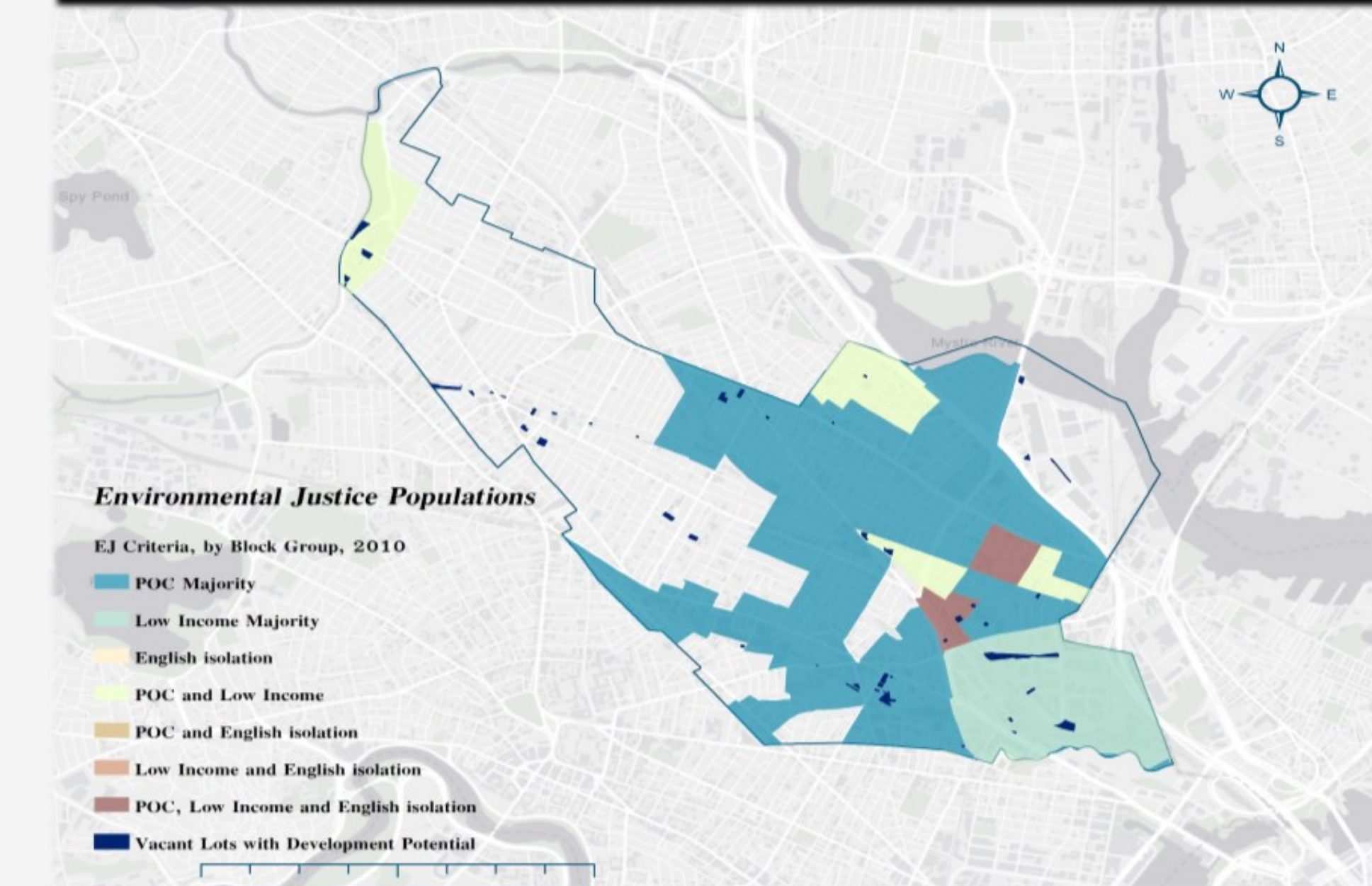


### RECOMMENDATIONS AND FURTHER ANALYSIS

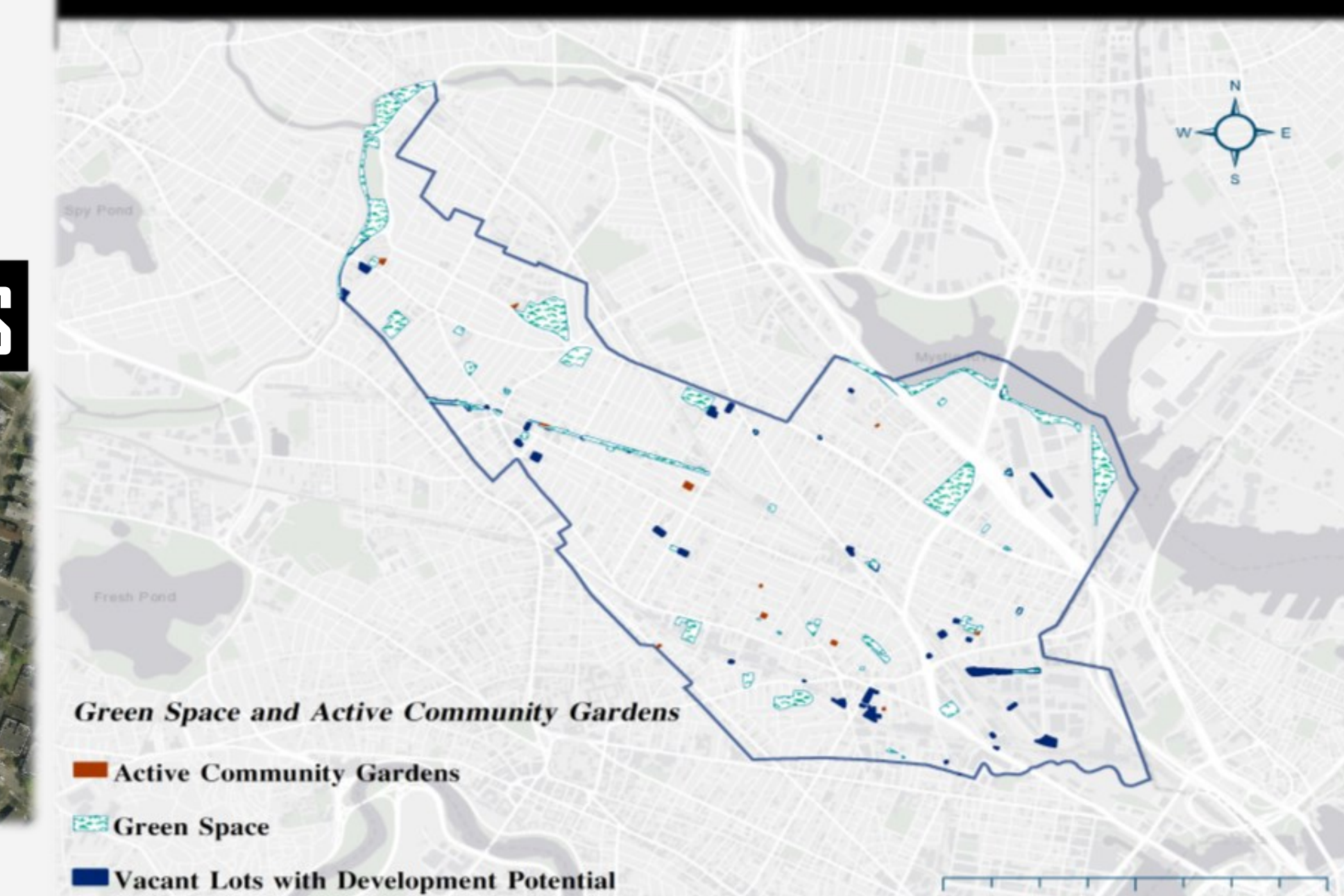
In a city with continuous development, especially in preparation for the incoming Green line, further ground-truthing is required to identify and confirm vacant lot eligibility for this project. This suitability analysis did not include an in-depth parcel size analysis other than initial, intuitive sorting of plots that were evidently too small to host a garden. Although an initial slope analysis denied evidence of slopes greater than 20% in the city, it could be useful to acquire a smaller elevation raster to confirm these results.



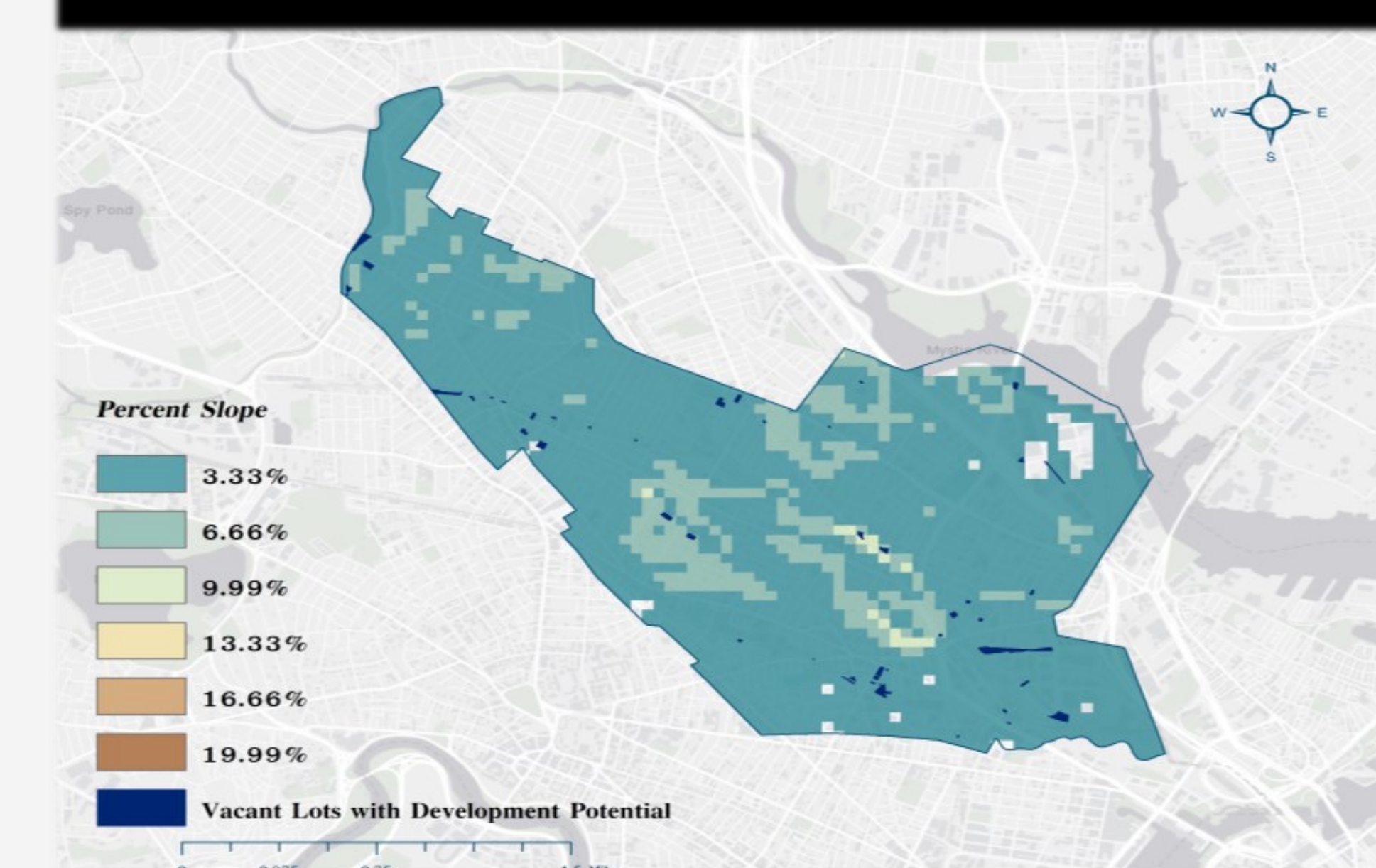
### ENVIRONMENTAL JUSTICE



### GARDENS AND GREEN SPACE



### SLOPE



#### Data Sources and References:

City of Somerville GIS Database

City of Somerville, Open Space and Recreation Plan, 2016-2023

Google Maps

MassGIS Bureau of Geographic Information

Tufts University MDrive

Icons: Flaticon.com

GCS 1983 Massachusetts State Plane, Mainland Zone (NAD 83)

Map Projection: Lambert Conformal Conic

Cartographer: Aberdeen Bird

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