Re-Use Analysis for Vacant Lots in New Bedford

**Introduction**

New Bedford, Massachusetts, a historic seaport city with a population of 100,000 residents, has experienced significant economic change over time. As a result, New Bedford currently has over 2,000 vacant parcels scattered across residential, commercial and industrial areas. City planners have been exploring options including development, innovative pocket parks, urban agriculture and have already transformed several of these spaces. This project, at the request of City Planners, explores potential future uses for the vacant lots, specifically lots not suitable for development. The analysis is based on a small percentage of the vacant lots: those in tax title, as well as those in five target neighborhoods. The potential uses identified by the City of New Bedford include urban agriculture, open space, tot lots (playgrounds), and parking. The City also expressed an interest in creative approaches to place-making in some lots as well, including public art, or performance and event space.

**Methodology**

The most important part of this project was to determine, in partnership with the city, what criteria would be used to analyze the lots for potential future uses. The criteria and data layers used to explore these categories are listed in the table below.

<table>
<thead>
<tr>
<th>Potential Future Use</th>
<th>Data Layers Used For Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Agriculture</td>
<td>Supermarkets and Farmers Markets, Population Density</td>
</tr>
<tr>
<td>Tot Lot/Playgrounds</td>
<td>Distance to Playgrounds, Child Population Density</td>
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<tr>
<td>Open Space</td>
<td>Distance to Open Space, Population Density</td>
</tr>
<tr>
<td>Parking</td>
<td>Distance to Key Commercial Areas identified by the City</td>
</tr>
<tr>
<td>Public Art/Experimental Uses</td>
<td>Lots in close proximity to healthy food, parks or playgrounds, and not near commercial areas</td>
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</tbody>
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The questions considered in this project are:

1. Which areas of the city are the furthest from open space, playgrounds or healthy food sources and of these areas where is population density highest?
2. Which vacant lots are within close walking distance to commercial districts?

In order to analyze the lots according to the decided upon criteria, a matrix system was used where both population density data and data regarding access to the above data layers would be added together in order to analyze each lot for future use.

First, a population density raster was created, as well as a child population density raster which illustrated spatially where the densest parts of the city are located. Both were based on census block data and then put into three classes, low density, medium density and high density.

Then, for each of the criteria, a raster was created based on the data layers above to show access to food sources, open space, playgrounds and commercial districts. These were also reclassed into three categories for each criteria: low access, medium access and high access.

The raster calculator was then used to create a matrix based on the criteria and the population density. However, the parking analysis only looked at distance to commercial areas and not density. Lastly, the matrix scores were joined with both the tax title and target neighborhood tables.

This map only features lots in tax title, and only lots those with “low” access to categories, and “high” population density were included in this poster.

**Results**

This analysis pointed to clear clusters of low access to both open space and playgrounds and high population density, so there significant overlap between those lots ideal for these two uses. There was only one lot which had low access to food (defined by this project), and high density, but a cluster did appear when medium density was considered. Another important consideration is that a high percentage of vacant lots on the tax title list and the target neighborhood list are within close walking distance to the commercial areas. The end product of this analysis is that in addition to the rasters which map the city according to these four spatial categories, a table was also created with a “score” in each category for each lot.

These lots, among many others, do not have a clear future use according to our criteria. This means it may be ideal for public art or other experimental place-making projects.

**Next Steps**

Given the results, and the overlaps in the matrix scores for the vacant parcels, the next step would be to weigh the criteria used according to priority uses determined by the City. Other more complex factors and additional data would need to be considered, such as if the lot is in a residential, commercial or industrial areas and if the lot currently is being maintained. Once priority lots are identified, a community process would need to be facilitated in order to determine the desires of New Bedford residents. This analysis could be used to support the work. In the future, this process could also be performed on other lots once the City has a complete and comprehensive list.