Project: Location of Two New Farmers Markets in Alachua County

Background and Problem

The goal of this project was to locate, based on a set of criteria, the best possible locations for new farmers markets within Alachua County. In order to do this, we looked at two main target groups that the markets would be geared towards, students and low income households. The major challenge in the project was to find and utilize data that would best reveal the locations that coincided with our target groups.

Scope and Characteristics of Area

The first step in this process was to analyze the constraints given to us in the project. The task of locating a farmers market required us to do some research on the characteristics of successful farmers markets, and look briefly at the locations of the existing markets in Alachua and the groups they target. Some major considerations about choosing this location, before we started working with data, were to consider an easy-to-find, open location with parking and other amenities. Vendors for the market must be able to bring their vehicles into the area to sell their goods from, limiting setup and break down time.
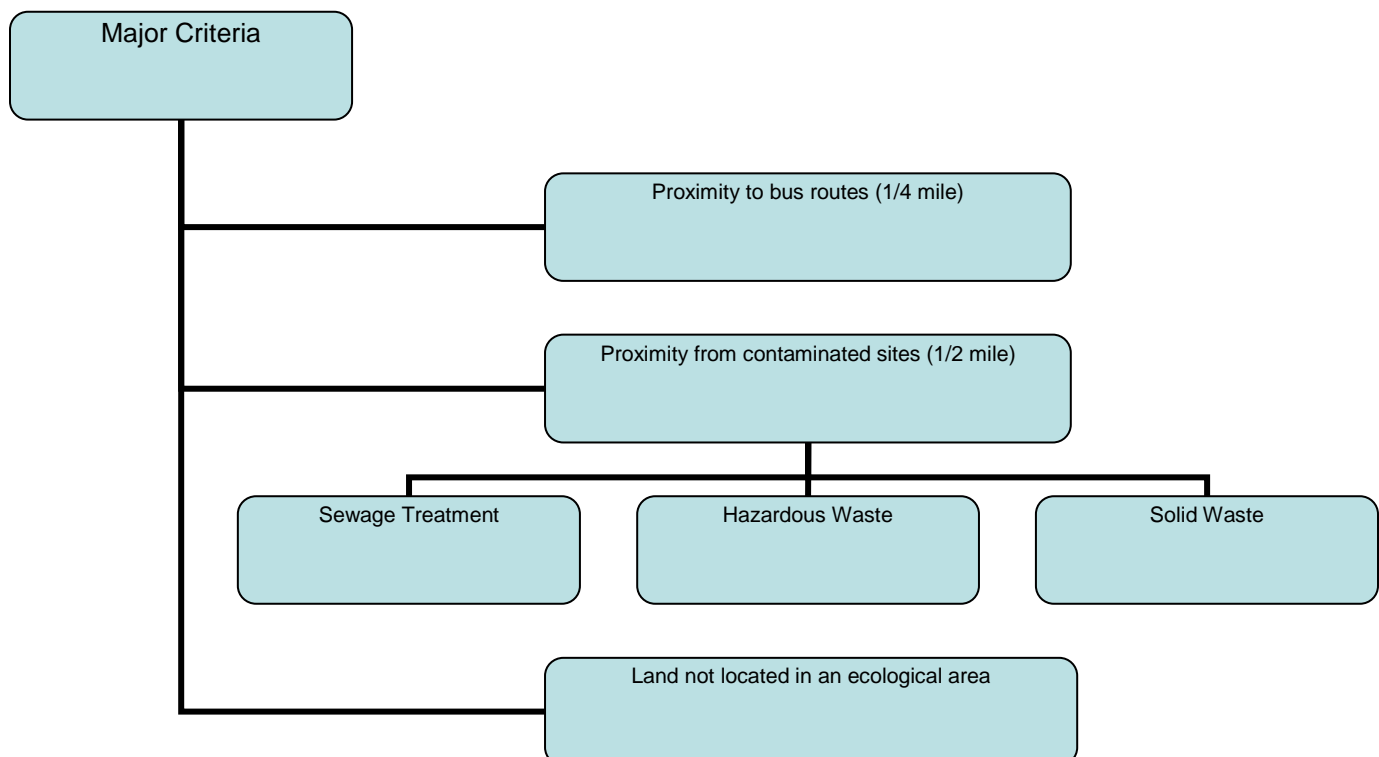
Objectives and Criteria

Our next task was to identify major criteria that would influence the selection of any kind of farmers market in the area. These major criteria helped us select localized areas to investigate further with more specified constraints. These main criteria were:

- Proximity to public transit, limited to a ¼ mile radius from these routes.

- Distance from hazardous waste, sewage treatment, and solid waste, limited to 1 mile or further from each of these types of areas.

- Proximity to hospitals, limited to 3 miles or less distance to a hospital.

- Avoiding ecologically sensitive areas, particularly wetlands.

Methodology

These created a group of zones that we could then break down into specialized locations for each of the individual markets. The more specialized criteria for each location were based on the groups of people that we wanted to target with these markets.

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Major Criteria
    │
    ├──────────── Proximity to bus routes (1/4 mile)
    │
    ├──────────── Proximity from contaminated sites (1/2 mile)
    │                        │
    │              ┌─────────┼─────────┐
    │         Sewage     Hazardous    Solid
    │        Treatment     Waste      Waste
    │
    └──────────── Land not located in an ecological area
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In the use of this data, we first took the bus routes layer, a line shape file, and did a buffer around it in ArcToolbox of ¼ mile, creating a 2-dimensional shape file. Next, we created a buffer around contaminated sites within Alachua County, and removed that shape from the bus routes buffer using the Erase tool from ArcToolbox. Finally, we compared this new form with the layer mapping the ecological areas within the county, to make sure what we were to select would not fall within any sensitive ecological area.
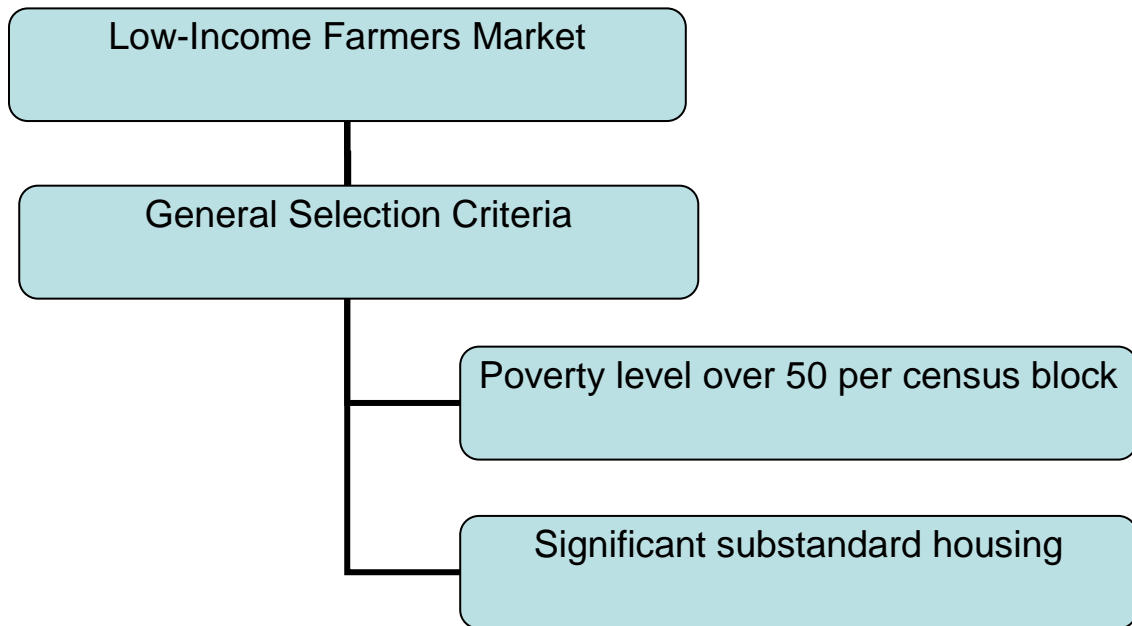
Now our task was to take this GIS information and continue to manipulate it based on our more specialized criteria.
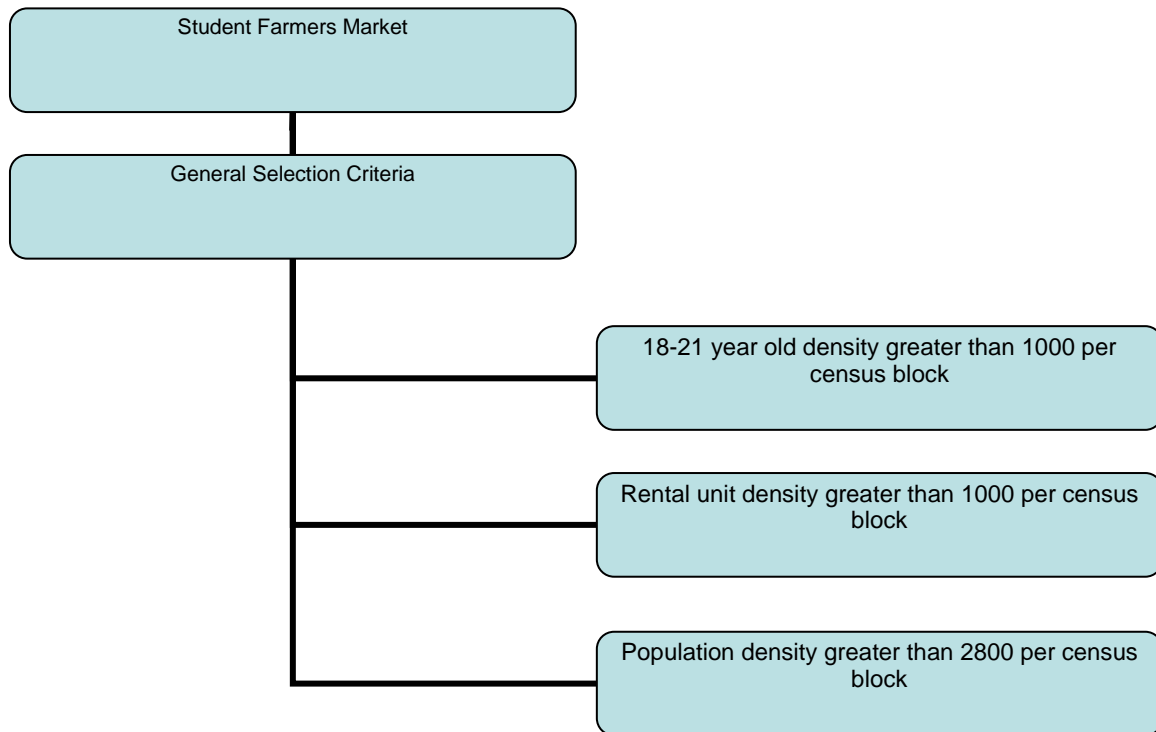
We took the database that contained the information we needed for these selections and joined it to the census block layer, allowing us to select using the Select By Attribute function the areas with large general population, greater than 2800 per census block. Next we used the same data to find areas with a large density of those ages 18-21,

selecting the blocks with over 1000 in this age group. Next, we selected the areas that had greater than 1000 rental units in them, in order to place the new market near where students live. All this data was joined via the Union tool and intersected with the areas found from our general criteria investigation. This narrowed down the number of places that would cater to students immensely.

The second subset of criteria was aimed at underprivileged families and neighborhoods within Alachua County. The process of this selection was as follows:

Low-Income Farmers Market

General Selection Criteria

Poverty level over 50 per census block

Significant substandard housing

In order to work with this data, we joined the census blocks layer with a new database containing the information we needed. After the databases were joined, we selected the areas that had over 50 residences under the poverty level, and created a new layer from that data. We then overlaid and examined places in Alachua with substandard housing, another dataset taken from the database, to make sure these selections aligned with substandard housing, which we did observe.

Results

The use of these more focused data sets allowed us a very refined selection from which to choose the final locations of these markets. The first selection, made for students within Alachua County, is located at 3702 W University Ave, at the Plaza Royale Complex. This location was one of the best that fell within our parameters, and it has many beneficial characteristics, like proximity to campus, the Oaks Mall, and has plenty of parking.
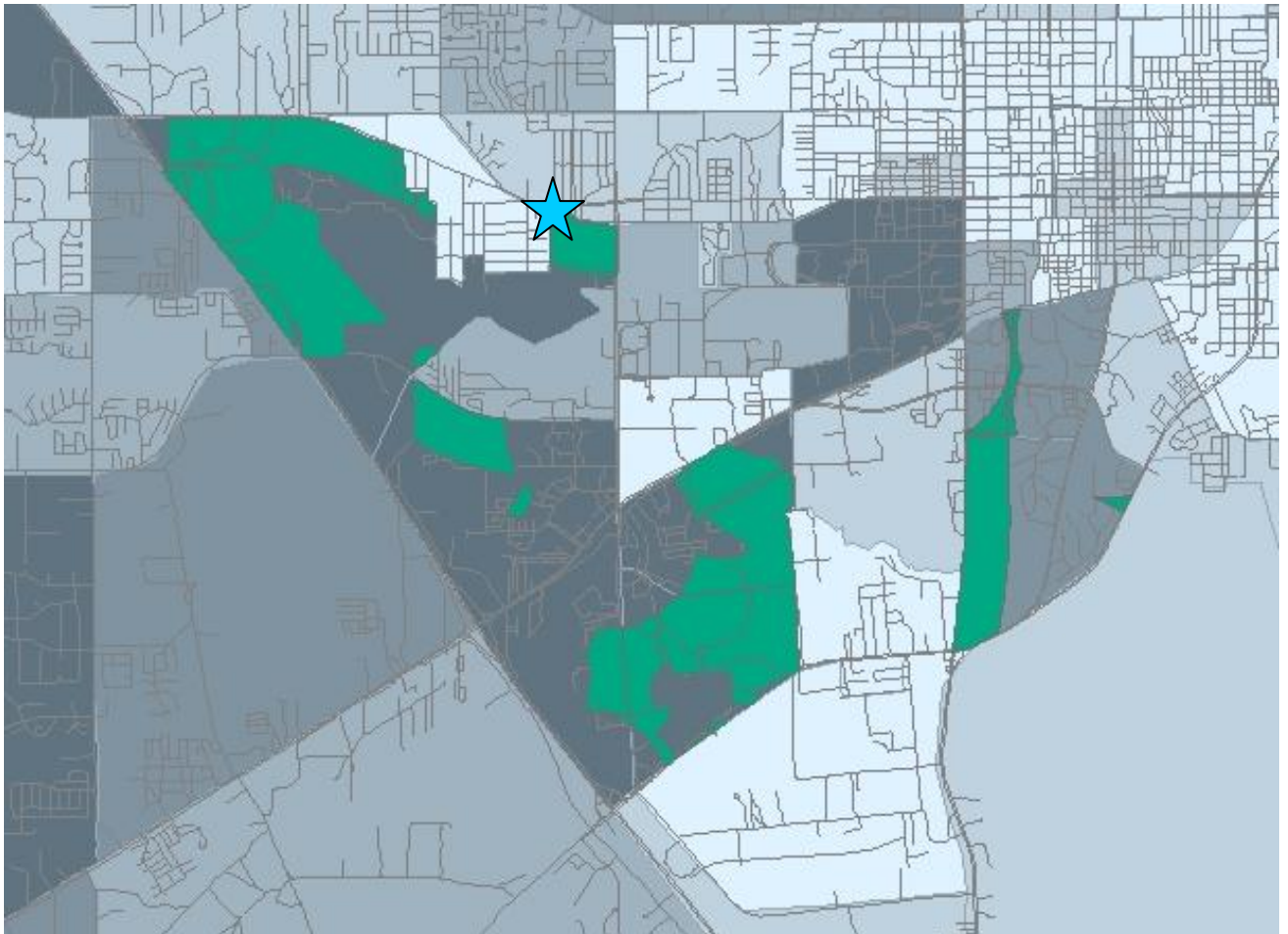
The second location, the market for the underprivileged in Alachua County, we placed at 112 SE 1st Ave, near the intersection of Waldo and University Ave. This site

has great proximity to substandard housing and low income areas, and would have opportunities for financial help from the CRA, or Community Redevelopment Agency.

Conclusion

These sites, selected using ArcGIS and data collected from the county, we feel are the best opportunities for new farmers markets, because they best accommodate very particular groups that could use them. The Plaza Royale market for students could be a temporary structure occupying part of the large lot there when the market is active, and the location on 1st Ave could be a permanent structure. Both spots have opportunities for success as new farmers markets in Alachua County. The Plaza Royale location is most attractive because it serves our target group, but also serves the community as a whole. This aspect strengthens the market as it demand will remain strong year-round.

While there were many alternatives, each was excluded for a particular reason. Our study found that both the Oaks Mall and PK-Young area are excellent locations for student-oriented markets, and should be considered for development. Specifically, the Oaks Mall site has a high connectivity to bus routes, commercial activity, and immediately neighbors a significant percentage of the student population. While the PK Young area lacked a usable host site, the neighborhood is rich in student density and is intersected by the popular Depot Road Pedestrian Trail. Additionally, the area is within walking distance to the majority of on-campus housing.

For the low-income market, the alternatives were not as numerous. Finding a location supported by both GIS and are real-world knowledge of the markets was not an easy task. We feel confident in placing the market near the Waldo Rd. / University Ave.

intersection because it is naturally a hub for East Gainesville. Visibility is excellent and vehicle access will be supported by three or more points of entry. While no data was available defending low-income market demand, we can point to the success of local seafood markets less than three blocks from the location. As a matter of economics, lower income families are particularly prone to think with their wallets As farmer's markets tend to provide a higher utility for the consumer, we can be somewhat confident that the market would be a success.