# Exploring Child Friendliness of Foodservices in Alachua County

By:

Christina Maurice, Stephanie Zarkis, John Million, & Thomas Spoto



Alachua County, Florida

# Goal

* To create awareness of the degree of child friendliness of foodservices in Alachua County by:

  * Discovering areas that neglect health concerns of children due to the quality of food available
  * Locate areas most difficult for children to obtain food
  * Find areas in need healthy food alternatives for children

# Alachua County Statistics

* population 247,336
  * 44,285 are children.
    * School Board's data, ~50% of the children are in free meals programs with ~25% of them in Food Stamps or other welfare programs.

# Children are being Cheated on Interests

Children are neglected and taken advantage of when it comes down to food availability

Examples of this:
* Fast-food restaurants-
    * Target areas closest to schools and residential areas that house the largest number of children
    * Out-number all other food sources in these areas as well

* Healthy food sources are usually farther and harder to get to for children
    * Usually not walking distance like most fast-food places
    * Are usually not centered around areas where children can travel to on there own and are distant from areas where children reside

# Fast Food vs. Health Foods

# Health Conditions and Concerns: Are Fast-Food Restaurants Targeting Schools?

* Fast-food restaurants cluster within walking distance from schools, according to a study published in the American Journal of Public Health (2005;95:1575–81).

*

* Over past 30 years, fast-food chains have seen dramatic increases in sales, as Americans have come to rely more heavily on meals purchased outside of the home

* Children and adolescents make up a large percentage of the fast-food market. Among teenagers the proportion of daily calories from fast food and restaurant food has risen from 6.5% in the 1970s to 19.3% in the 1990s; about one in three children and adolescents eats fast food on a typical day. Portion sizes at fast-food chains are increasing and are now often two to five times larger than their original size.

# Health Conditions Continued…

* A recent study in Chicago looked for patterns in the distribution of fast-food restaurants relative to school locations.

    * They found that a significantly greater number of fast-food restaurants were located close to schools than if the restaurants had been distributed independently of school locations. In fact, **three to four times as many fast-food restaurants were clustered within a 1.5-kilometer (about 1 mile) distance from schools than was predicted by a random distribution pattern.** The average distance between any school and the nearest fast-food restaurant was found to be 600 meters, a distance that can be readily walked in about 7.5 minutes. Thirty-five percent of schools had at least one fast-food restaurant within 400 meters (a 5-minute walk), and 80% had at least one fast food restaurant with 800 meters (a 10-minute walk).

* **The big question Is Alachua County any different?**

# Effects from malnutrition from Fast-Food

* Fast-food consumption has contributed to the dramatic increases in obesity among children in the United States observed in the same time period.

* High consumption of fast food is linked to weight gain and insulin resistance, which can lead to diabetes.

# Health Foods

Plain and simple:

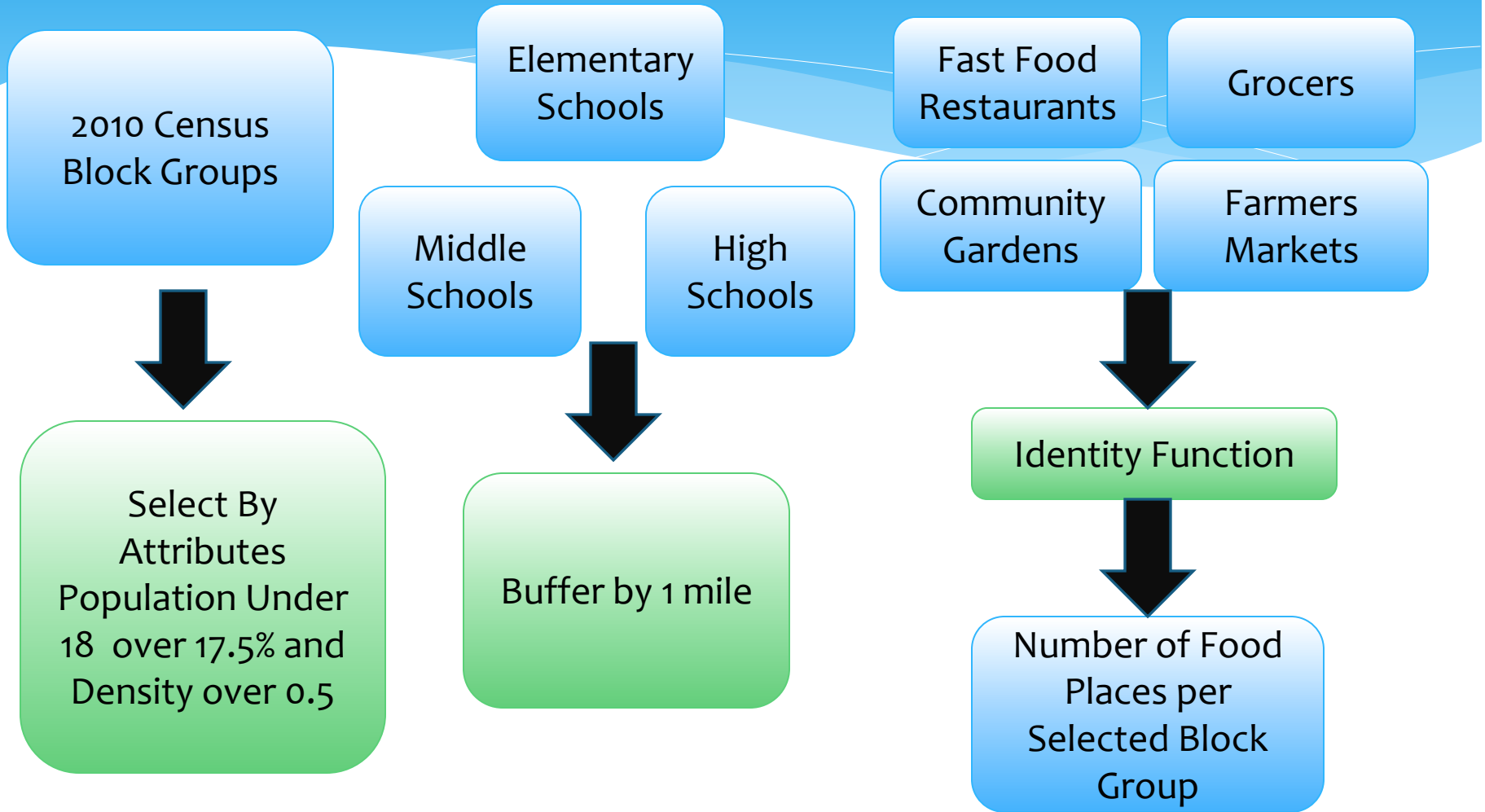We want our children to have better access to better foods

# Healthy Food Alternatives

* Grocers
* Community Gardens
* Farmers Markets
  and Produce

# Objectives to reach the main goal, criteria –

* Develop and utilize an effective method for identifying trends in food service locations relative to schools and locations with high children populations
* Identify high children density areas where food services are abundant and areas where they are lacking
* Determining the differences in availability of healthy food choices and fast food

# Methodology

**2010 Census Block Groups**

**Elementary Schools**

**Fast Food Restaurants**

**Grocers**

**Middle Schools**

**High Schools**

**Community Gardens**

**Farmers Markets**

↓

**Select By Attributes Population Under 18 over 17.5% and Density over 0.5**

↓

**Buffer by 1 mile**

↓

**Identity Function**

↓

**Number of Food Places per Selected Block Group**

# Selection Methods:

* Identity function to bring in food data
  * Summarized data in attribute table
  * Joined data to blockgroup attribute layer
  * Provided counts of food per blockgroup
* Searched by attributes for percentage over 17.5% and density over 0.5

# Buffers to display selections:

* Buffered 1 mile from all schools
  * Elementary, middle, and high
* Observed the buffered areas for each of the food services to look for trends

# Children and Food in Alachua County
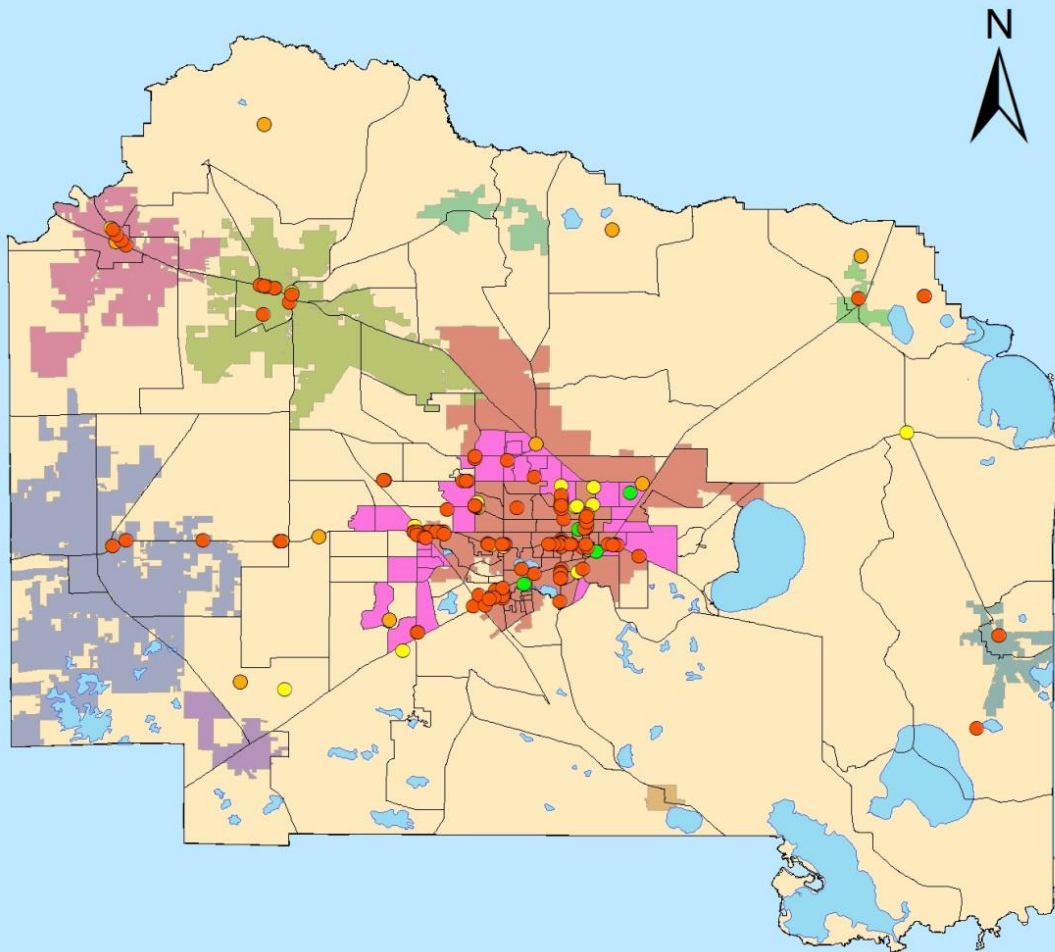
**Fast Food Restaurants**
**Grocers**
**Community Gardens**
**FarmersMarkets**
**Study Area**
**Blockgroups**

**Municipalities**
ALACHUA
ARCHER
GAINESVILLE
HAWTHORNE
HIGH SPRINGS
LACROSSE
MICANOPY
NEWBERRY
WALDO

N

Created by: Team 1
Scale: 1, 200,000
Projection: GCS North American 1983

0    2.5    5        10        15        20
Miles

# Alachua County Schools and Food Options

N

### Legend
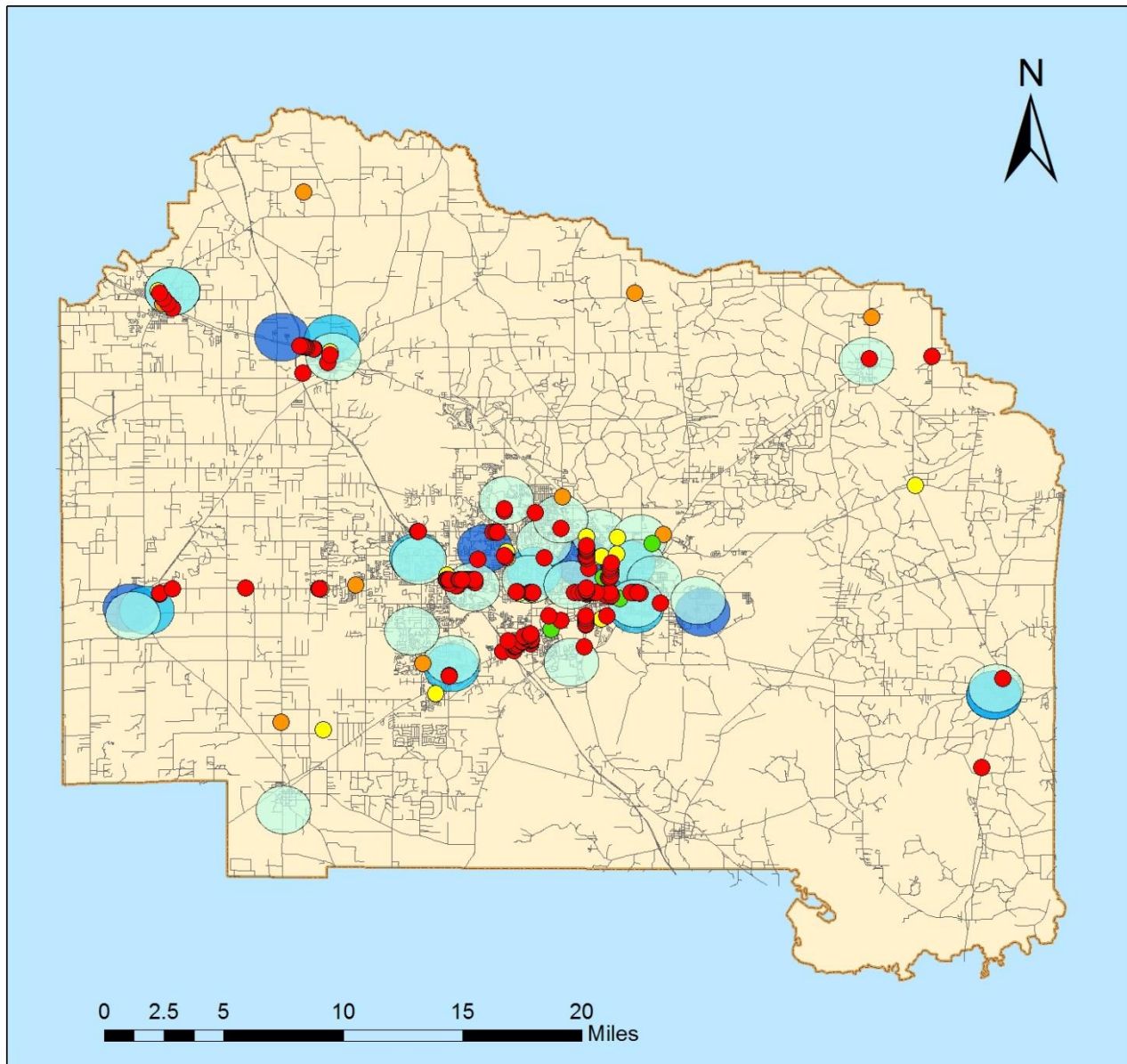
- ● Fast Food
- ● Grocers
- ● Community Gardens
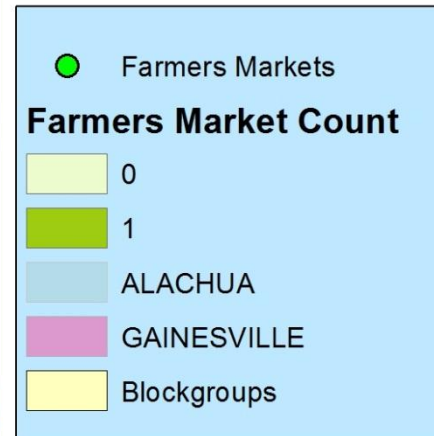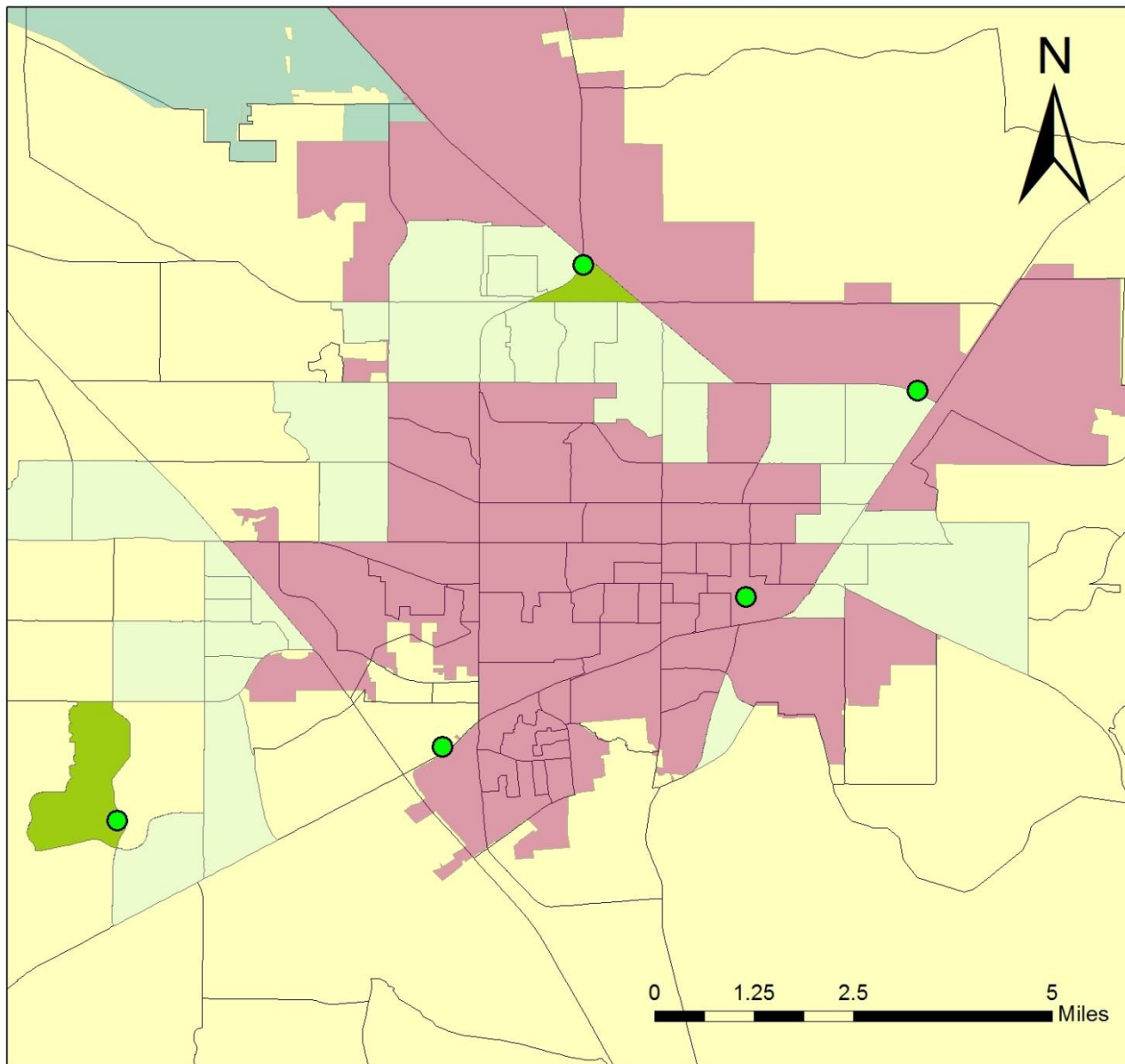- ● Farmers Markets
- Elementary Schools
- Middle Schools
- High Schools
- —— All Roads

Created By: Team 1
Scale: 200,000
Projection: GCS North American 1983 HARN

0   2.5   5   10   15   20
Miles

Fast Food and High Density and Percentage of Children Under 18
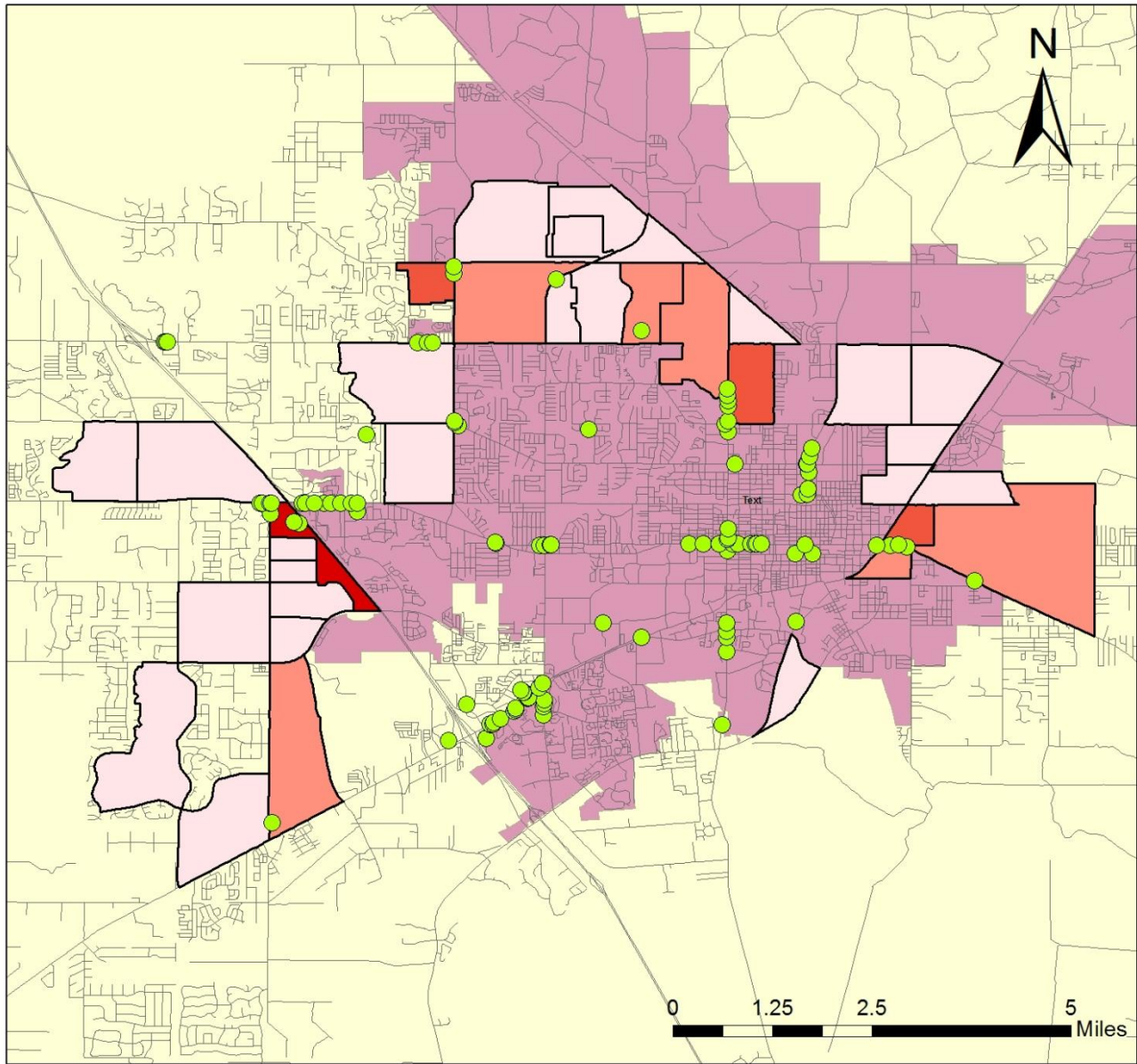
# Grocery Store Locations

N

- Grocers

**Grocery Store Count**

- 0
- 1
- 2
- Blockgroups
- ALACHUA
- GAINESVILLE
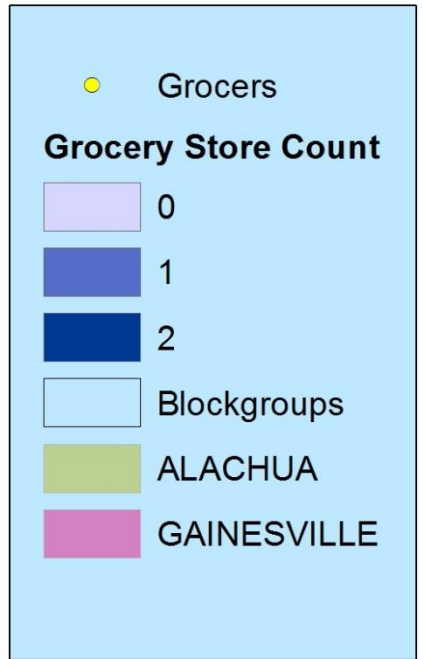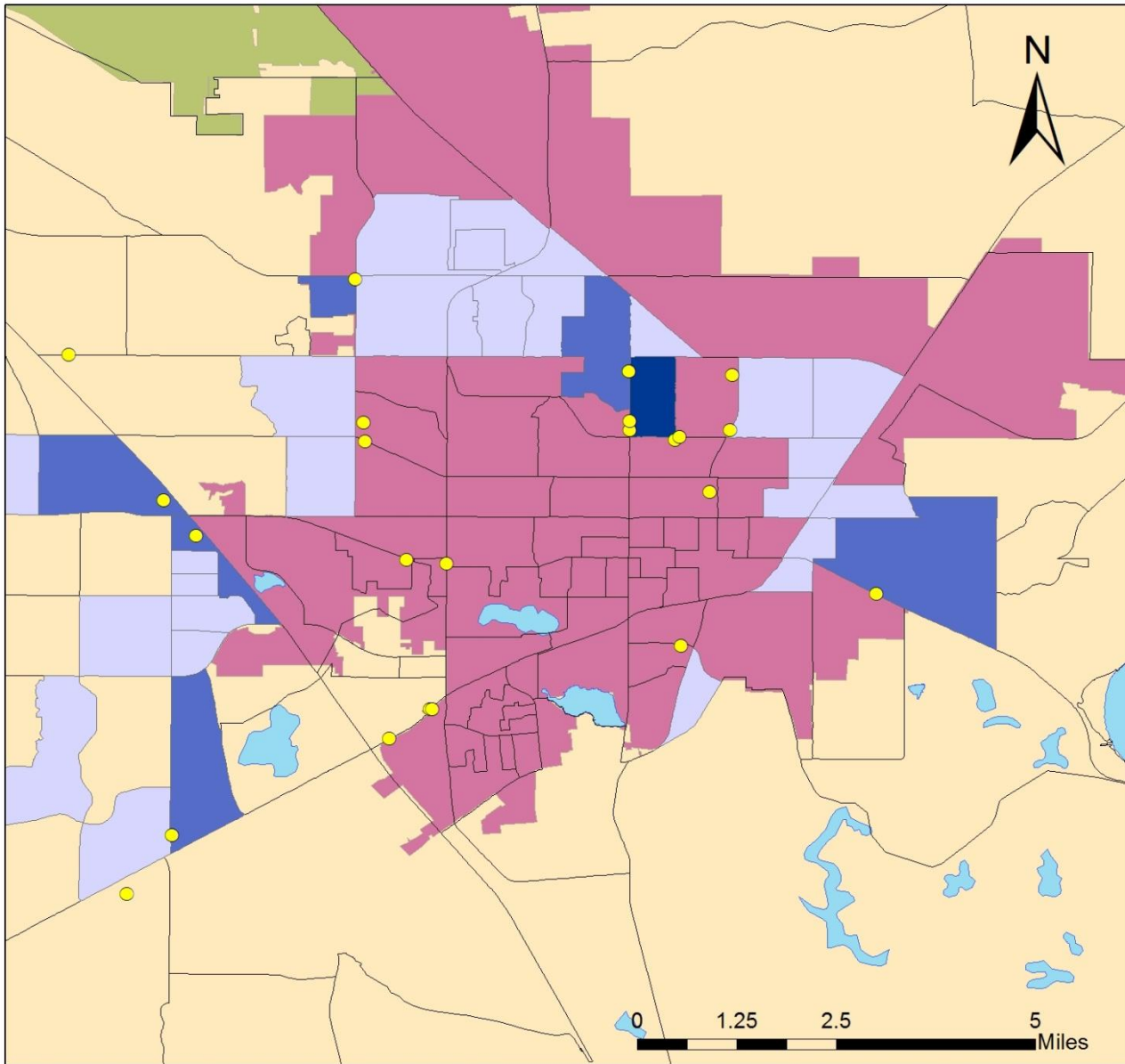
Created By: Team 1
Scale: 60.000
Projection: GCS North American 1983 HARN

| 0 | 1.25 | 2.5 | 5 |
Miles
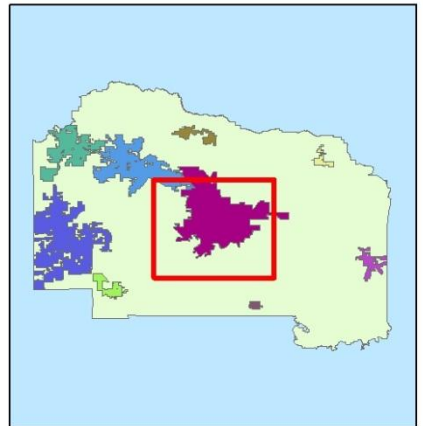
# Farmers Markets in Areas of High Density and Percentage of Chilrden



Farmers Markets

**Farmers Market Count**

- 0
- 1
- ALACHUA
- GAINESVILLE
- Blockgroups

Created By: Team 1
Scale: 1:60,000
Projection: GCS North American 1983 HARN

N

0   1.25   2.5   5
Miles
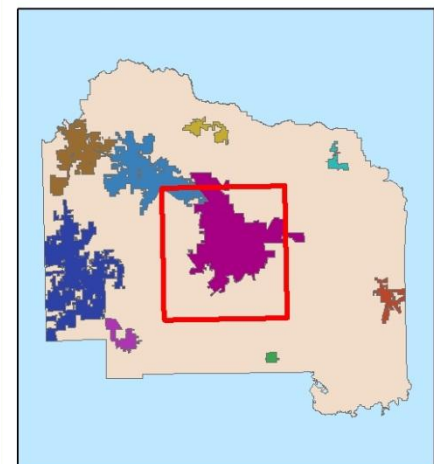
# Community Gardens and High Children Density



## Legend

● Community Gardens

**Community Garden Count**
- ▇ 0
- ▇ 1
- ▇ Blockgroups

**Municipalities**
**NAME**
- ▇ ARCHER
- ▇ GAINESVILLE

N

Created By: Team 1
Scale: 1:60,000
Projection: GCS North American 1983 HARN

0   1.25   2.5      5   Miles
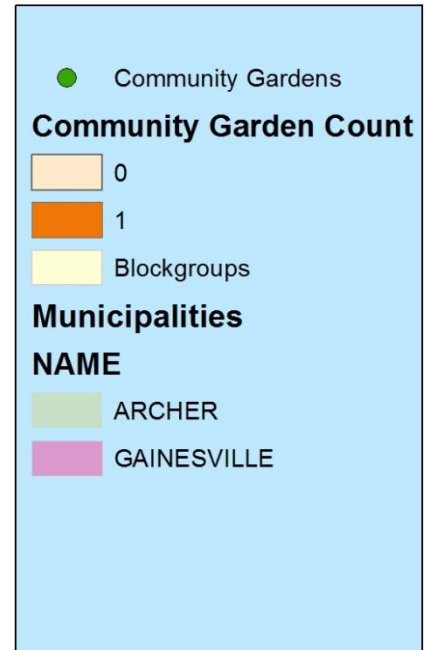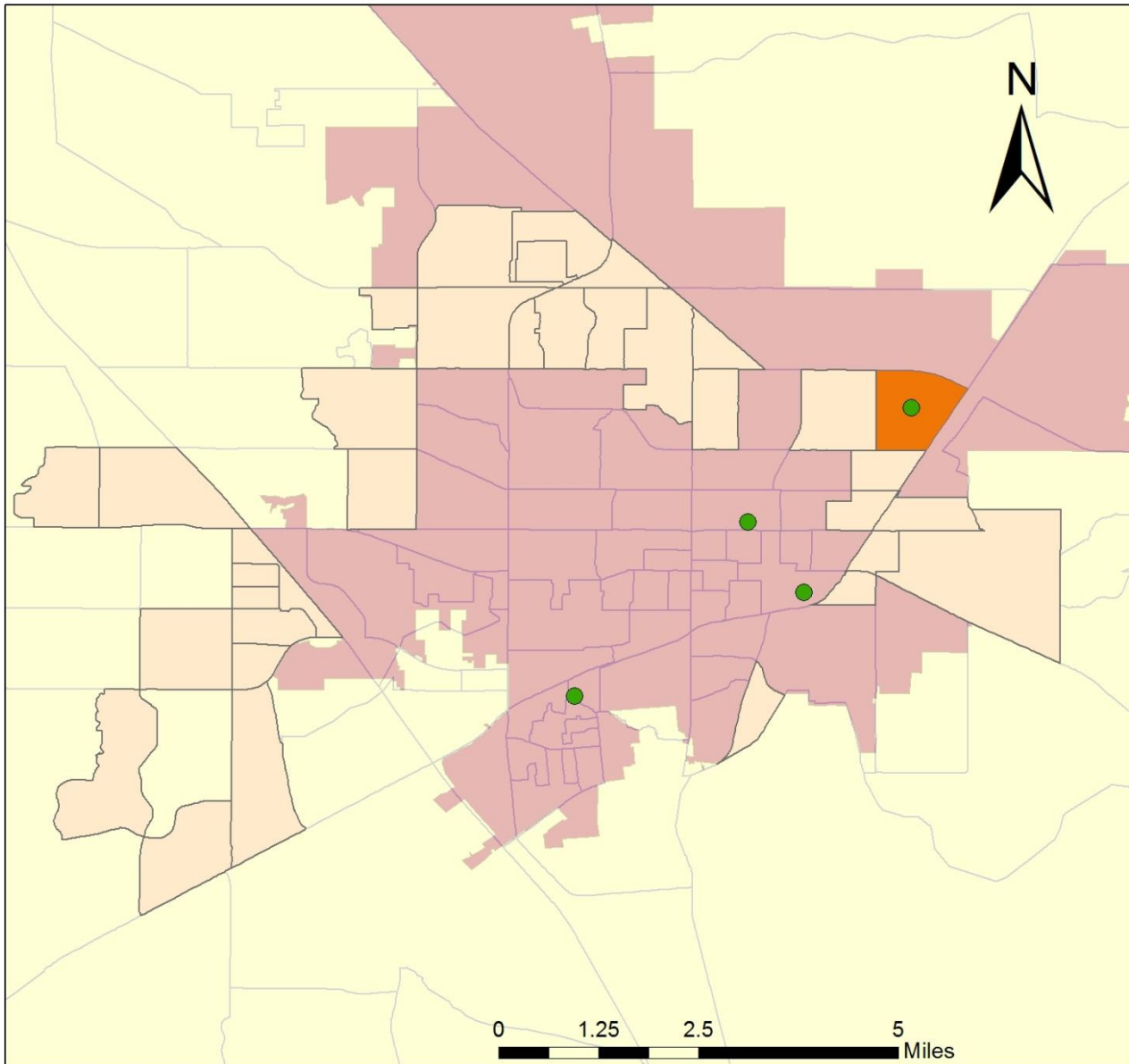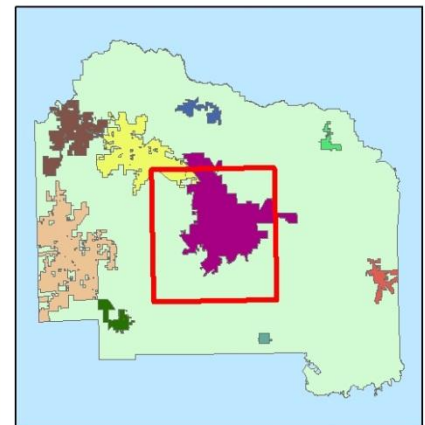
# Conclusions

* Fast Food is more prevalent in blockgroups with high density of children compared to healthy options, but there is not a strong correlation

* Healthy food options are scarce in areas with high percentages of children

* Increased availability of healthy food options located in areas with high density of children is recommended

* If children make good choices concerning food, that will promote the long term health of the community

# Sources

* http://www.bastyrcenter.org/content/view/932/