

# **Alachua County Women and Children Community Centers**

**Jordan Brothers**

**Yana Sobora**

**Travis Eisentraut**

**Kira Taylor-Hoar**

## **Introduction**

As part of our assignment, we constructed a GIS based project using the program ArcGIS. The purpose of the project was to ascertain the ideal location for three Community Centers targeted directly towards underprivileged children and domestically abused women.

The obvious necessity for these community centers was made apparent to us both through the statistics we received, and through the testimony of Courtney M. Allen who spoke to us regarding the McKinney-Vento laws. Among these reasons are the facts that in Alachua County alone there are over 50,000 people in poverty, and at least 8% of which are children. In addition to this, on average there are over 2,000 reported cases of domestic abuse, as well as untold numbers of unreported cases. We also learned from Courtney Allen that she is the only person in Alachua County who is assigned to work on cases that involve the McKinney-Vento laws, which helps to show how overextended those few dedicated individuals who are available to these families have become.

The study area we used for this project was limited to Alachua County. It was important to limit the scope of our project to Alachua County not only because of the above stated facts, but also because otherwise it would not have been feasible to select only three sites with the greatest need for these community centers. If we had needed to spread the centers out over a greater area we feel that they would have been able to do less good overall, and in all likelihood would have done relatively little to alleviate the stress that is currently placed on the existing community centers due to their over crowdedness.

## Objectives

For this project, our objective was to create a GIS map that would display the locations of the parcels that we selected for as the optimal places for the three community centers. Before creating this map however, we wanted to use the ArcGIS program in order to ascertain the best locations to build our community centers. We wanted to do this by utilizing the data provided, and the various selection options provided to us by ArcGIS, in order to fully justify our decisions as to where it would be best to construct each Community Center.

The criteria we used to search for the ideal location for our three Community Centers were:

1. Must be in one of the 15 highest concentrations of children ages 0-15
2. Shall be in an area with annual income below \$25,000
3. Vacant parcels between 4 and 10 acres (in order to eliminate nature conservations, wetlands, and rivers)
4. Vacant parcels that are within a 1 mile radius of the 5 highest child density areas as well as within 1½ miles of homeless children
5. Within ½ mile of major roads
6. Within ¼ of a mile of a bus route
7. Within 3 miles of a Elementary, Middle, and High School
8. At least  $\frac{1}{3}$  of a mile from the nearest registered sex offender
9. The parcels had to be affiliated with Florida owner
10. Within a 1 mile radius of a domestic violence incident
11. Must be in a zone with greater than 13% uninsured

## Methodology

# Density

Find the 15 highest concentration of children ages 0-15

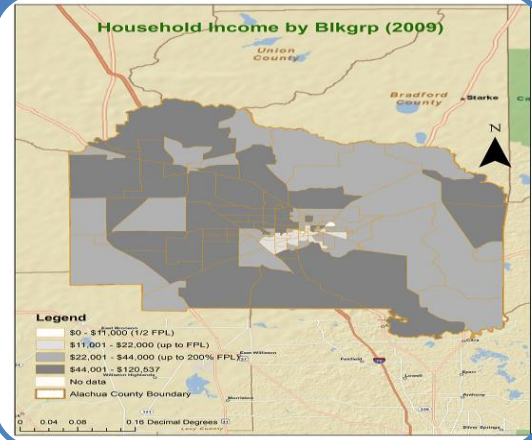
Create a new column in the Children by Blockgroup (2009) attribute table and name it chldrn 0-15.

To create this column, subtract two existing columns in the table: MF 0\_19 – MF 15\_19

3

Create a selection of the five highest densities of children 0\_15

Conducted a GIS income analysis and found the two lowest income blocks in Alachua county



## Vacant Parcels

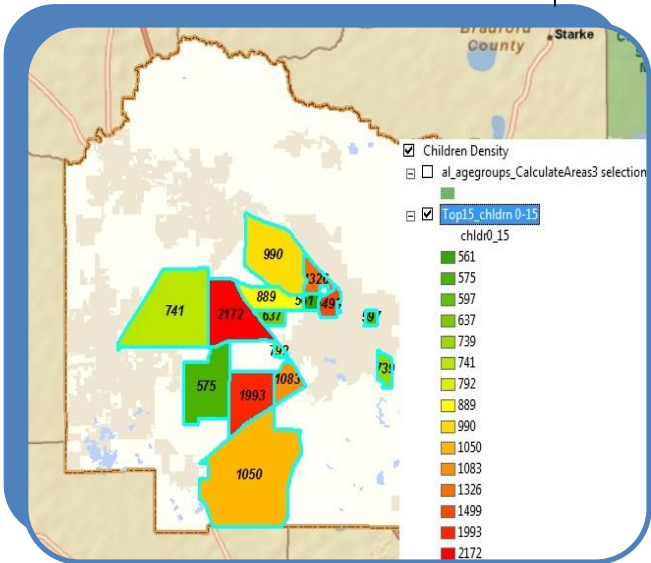
Select by location all vacant parcels that are:

Within a 1 mile radius of the 5 highest child density areas

Within 1½ miles of homeless children

Between 4 and 10 acres

**14 Possible Locations**



**Roads**

**Within 1/2 mile of major roads**

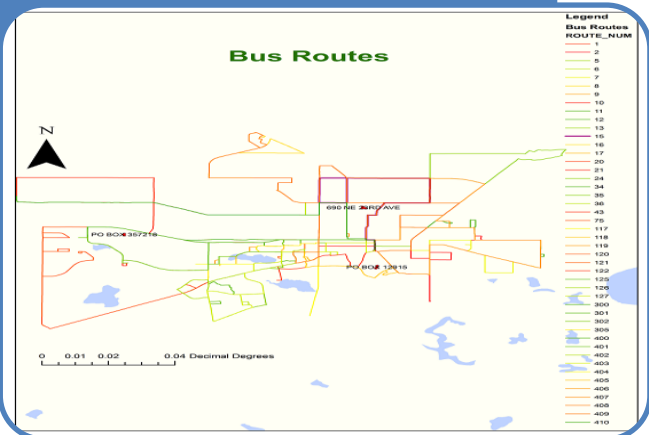
Select by Location:  
1/2 mile buffer around major roads

**Bus Routes**

**Within 1/4 of a mile of a bus route**

Select by Location:  
1/4 mile buffer around bus route

**13 Possible Locations**



4

**Schools**

**Within 3 miles of each type of School**

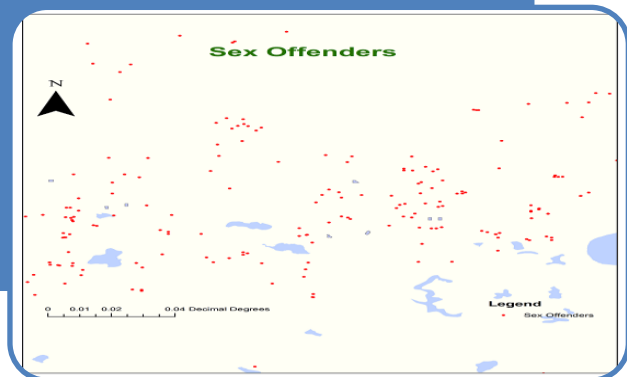
Select by Location:  
3 mile buffer around each type of school

**Avoid Sex Offenders**

**Not within 1/3 of a mile of a registered sex offender**

Select by Location:  
1/3 mile buffer around sex offenders

**8 Possible Locations**



**Out of State  
Parcels**

Select by attributes all of the parcels  
where 'name'="FL"  
This only left parcels in FL

**6 Possible  
Locations**

**Domestic  
Violence**

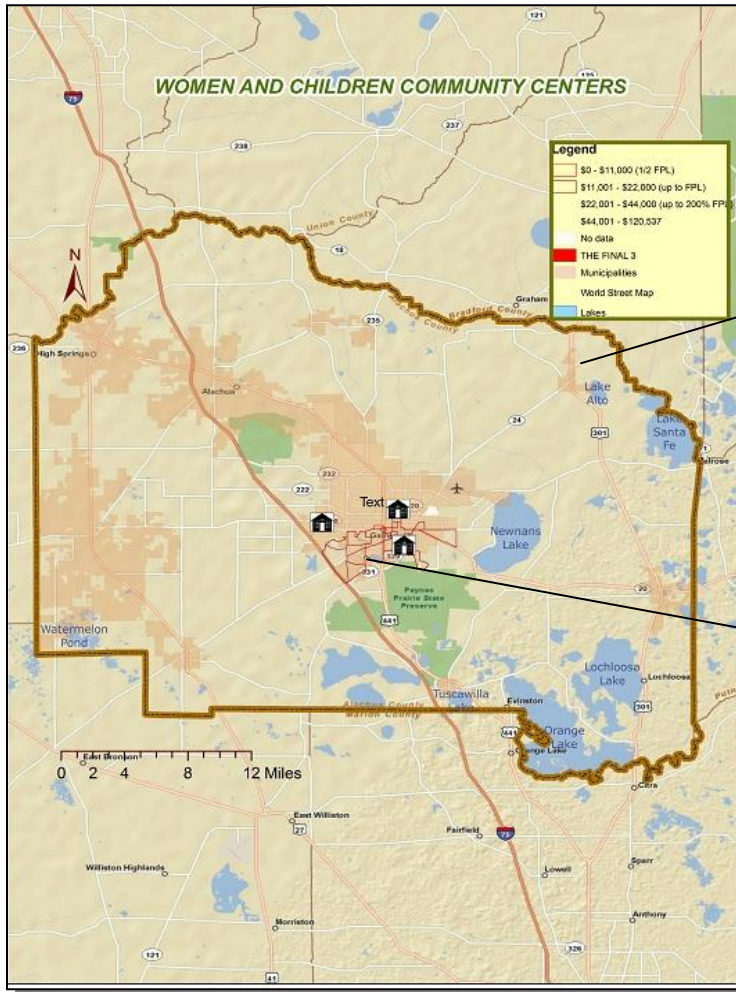
**Within 1 mile of a domestic  
violence incident**  
Select by Location:  
1 mile buffer around each  
domestic violence incident

**Percent Uninsured**

We selected by attributes, in order to  
determine the sites with greater than  
13% uninsured

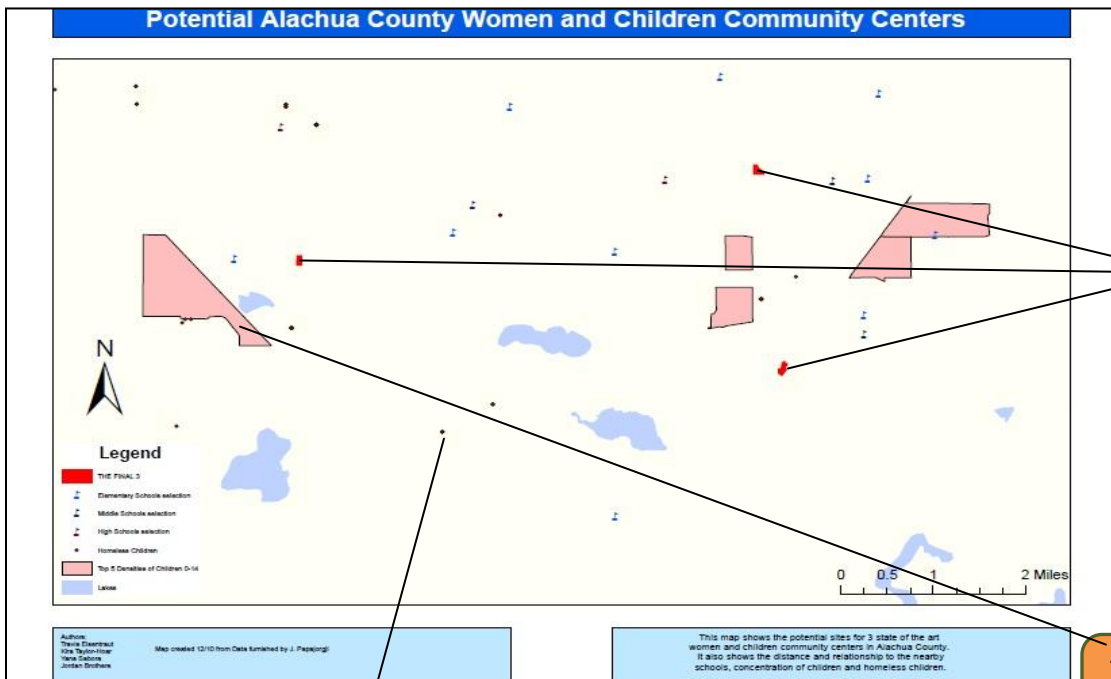
**This Left Our  
Final 3 Parcels**

### Discussion



*This map depicts the final three parcels where we believe the community centers should be constructed.*

*The map clearly shows that all centers are around areas of annual incomes below \$25,000*



*According to our analysis, these sites are best fit for the community centers*

*All the schools that are within a short distance from the three community centers*

*The five highest densities of children ages 0-15*

## **Conclusion**

We found that this project was surprisingly difficult, due to the fact that many of the criteria we were initially planning on using showed quite a bit of overlap. We discovered that it was difficult to narrow down our results for a variety of reasons. One of the earliest difficulties to arise was the fact that there were so many vacant parcels to pick from. The next problem we ran into was that many of the criteria we were using to attempt to narrow down the possibilities occurred in approximately the same areas, which made eliminating possible plots extremely difficult. This being said, it also helped to reinforce the idea that these were areas that needed these community centers most. By the end of the project we believe that we were able to use a variety of different factors in order to best assess where these community centers should be located for maximum impact on the community.