Assessing After-School Child Friendliness in Alachua County

URP 4273 Survey of Planning Information Systems

Spring 2010

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Team 1

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Main Goals

- Identify after-school activities within Alachua County that are suitable for children in the age group 5-17

- Locate where these after-school activities are distributed throughout Alachua County

- Locate where children are in Alachua County relative to after-school activities

- Assess the locations of low-income and higher-income children's accessibility to after-school activities

- Stimulate interest and awareness of possible infringements of children's rights in the county

- Promote the improvement of children's conditions in the urban environment; specifically for the interests of the less advantaged children in the community

Background – problem statement and justification

Children's environments directly affect the way they interact with the world. If a city or town is planned badly, children are the first to suffer. Latest reports indicate that about 30% of children are overweight or obese. The benefits of child-friendly community design include the promotion of healthier lifestyles and improved quality of social interactions between children and their surroundings. Children are often neglected in land use planning in two ways. First, children are given little consideration when it comes to design. Second, children are not given an opportunity to participate in decision-making.

We chose to evaluate the child-friendliness of Alachua County based on the accessibility of after-school activities. We selected the two extremes of income based on the Census block groups data. Our goal was to access if more after-school activities were available to children in high-income areas as opposed to children in low-income areas.

Scope and characteristics of study area

The project scope consists of Alachua County in the state of Florida. We used a county wide focus that looked at the children population spread across different municipalities including Gainesville, Archer, Newberry, Lacrosse, Waldo High Springs, Alachua, Hawthorne, and Micanopy. The study included children ages 5-17 in income areas $3,567-$11,424 and $22,130-$44,107. We focused on the following after-school activities: libraries, school programs, religious centers, public swimming pools, cultural centers, and parks. One of the aspects of our child-friendly after-school activities criteria was a half-mile buffer zone including the available modes of transportation. Transportation includes: public transit, trails, bike trails, and roads with possible sidewalks that are accessible to pedestrians.

Objectives to reach main goal, criteria

- Identify children population distributions with a focus on the low- and high- income children population

- Recognize which after-school activities available to children in Alachua County

- Discover which areas are "safe" in Alachua County

- Identify which after-school activities are within close proximity to low- and high- income children

- Develop strategies to include children in the planning process so that children have a direct voice in the development of policies, laws, regulations, and budgets for the community

Methodology

While conducting our analysis of child-friendly after-school activities in Alachua County we consistently used the Alachua County Boundary, Major Roads, and Municipalities while compiling our maps.

To begin our analysis we created several maps all consisting of different criteria. These include: Alachua County, Child Density, Socioeconomic Status, Child Activity Centers, Transportation, and Safety Issues.

For the Alachua County Boundary map we simply brought in the county boundary, major roads, and municipalities layers. We adjusted the symbology so that the items on the map would be more clearly defined.

For the Child Density map we added the child density layer and the Alachua County Boundary layer. We chose a minimum density of 20 children because we felt a density lower than that would decrease the need of after-school activities in an area. Then we created 7 classes of child densities. Next we created the Socioeconomic Status map by adding the layers listed at the beginning of this section with the Census block groups layer. Out of the Census block groups, we created 7 classes of income. We changed the symbology to make the child densities and different incomes more apparent on the map.

Next, we created the Child Activity Centers map. Here we added the layers listed previously in this section with the parks, schools, public swimming pools, religious centers, cultural centers, and libraries layers. We also added the child density layer to compare where the children to the activities. We removed the area of Urban Gainesville and created another child

activity center map to reduce clutter. We changed the symbology on both maps so that it would be easier to read.

Then we created a Transportation map with the layers listed above, bike trails, trails, RTS bus stops, RTS bus routes, and detailed roads layers. We adjusted the symbology on the map to clarify the different modes of transportation.

Next, we created a Safety Issues map including all possible items that could affect a child's safety. Then we added the previous layers listed above. And, the possible safety issues include: Fire Department, Superfund, Brownfield, Hazardous Waste, Solid Waste and Crime Rate layers. The symbology was adjusted so that the map was more legible.

Lastly, we created a combination of the maps listed above to create two final maps – Low Income, High Income. See GIS flow chart below for our process of analysis.
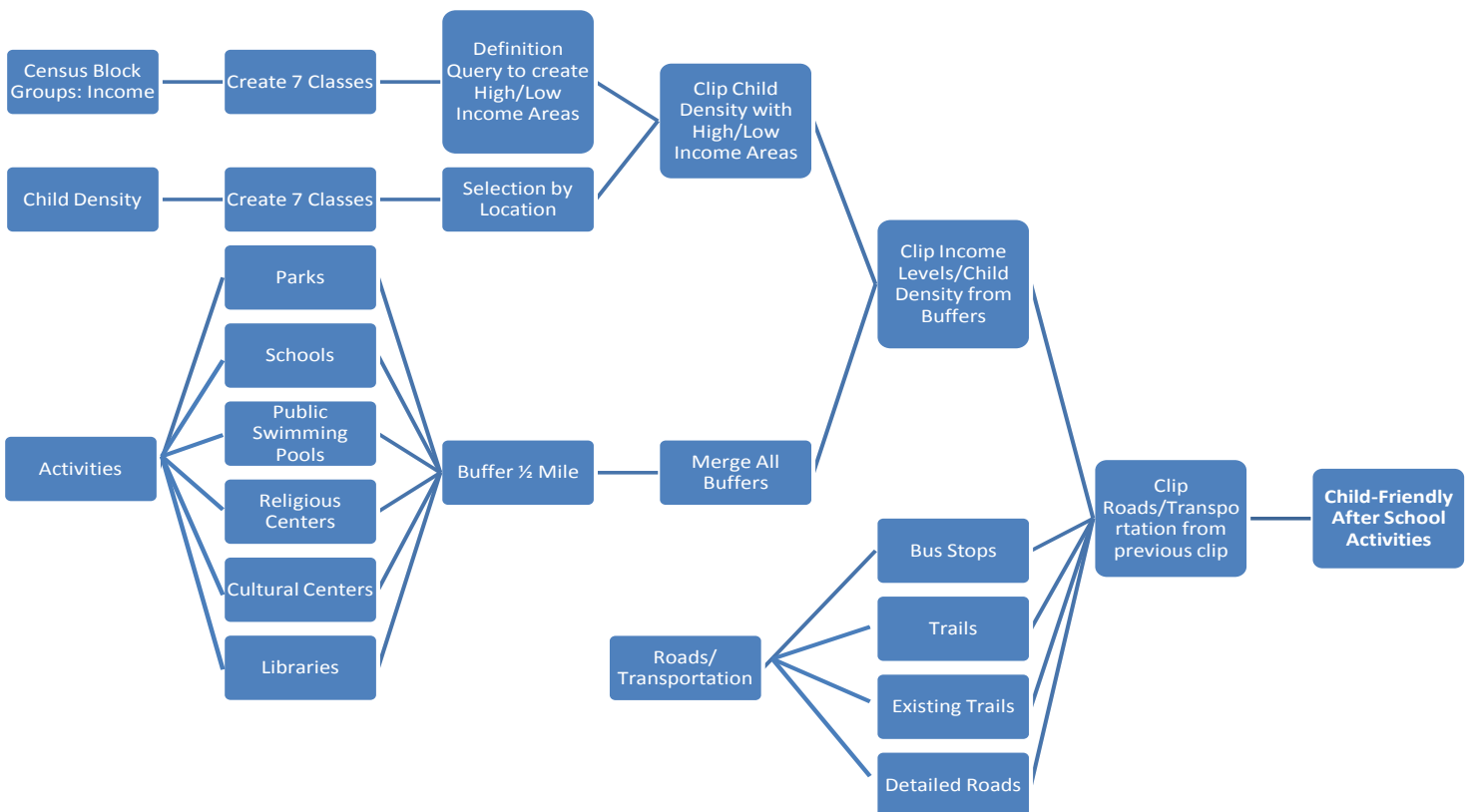
Results and Discussions

Through our analysis, we have discovered that there are activities available to children in Alachua County, but not to the extent that would be deemed satisfactory. Our two final maps show that there tends to be more accessible after-school activities to children in higher-income areas than those in lower-income areas. There should be no favoritism when it comes to planning for children. All children are important when it comes to the future of communities. The good news is that there is a currently a program run by Santa Fe Community College named "East Gainesville Initiative" that focuses on helping residents in this part of city which tends to be where the lower-income areas are located. The programs available include anything from after-school care to computer assistance and tutorial services in a church's computer lab for youth.

Another problem we noticed is the fact that beyond the city of Gainesville, there are very little options for children in the county when it comes to after-school activities. The lack of child-friendly activities to children outside of the Gainesville causes two possible issues. One issue is that children outside of Gainesville may be more prone to obesity because of a lack of interaction with their outside environment and other children in the area. Another issue is that children in these areas are dependent upon adults to drive them to activity centers since areas outside of Gainesville tend to lack adequate public transportation.

In addition to the problems listed above, we discovered that areas with the highest crime rates tended to be where low-income areas were located. So children living in these low-income areas are also subjected to unsafe neighborhood conditions. "Research has found that children who live in neighborhoods that are unsafe or that lack services face greater risks of developing

problem behaviors such as hyperactivity, aggression or withdrawal, regardless of the quality of their family life (Ross 1996)."
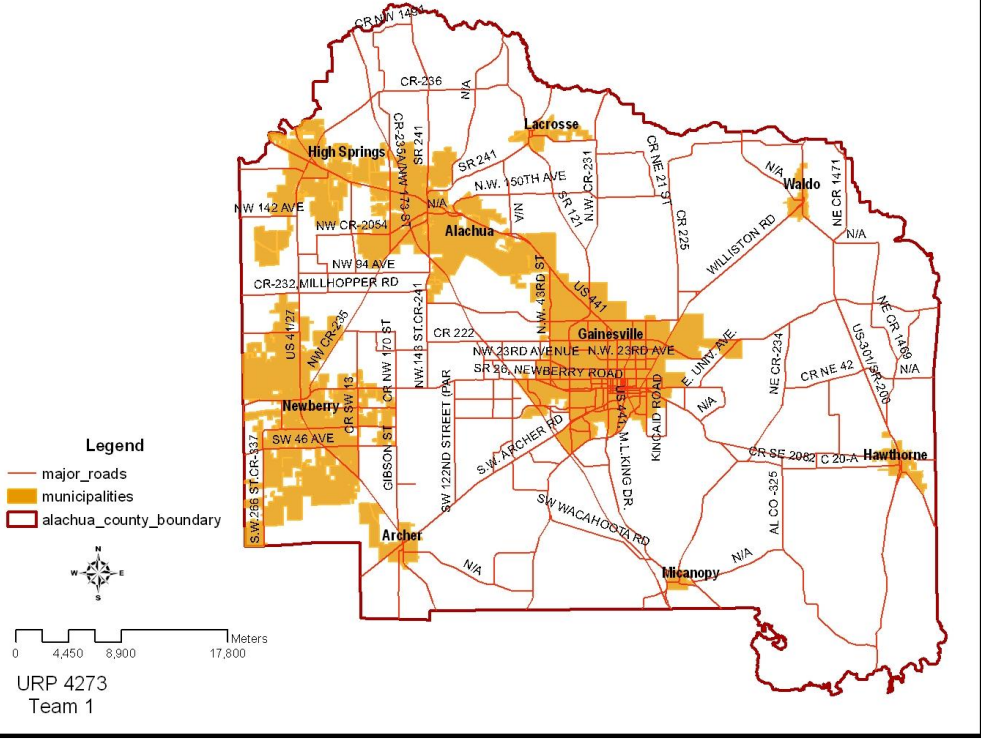
However, when it comes to other safety issues besides crime in Alachua County, all children are affected. Throughout Alachua County there are numerous hazardous waste and solid waste sites. There is no clear correlation when it comes to relating these issues with socioeconomic statuses. The only clear correlation is that areas such as Gainesville, Newberry, High Springs, and Alachua which have greater populations then the surrounding municipalities tend to have more hazardous waste sites.

Recommendations

- Educate the public on the importance of child friendliness

- Commence more active child involvement in community planning from both the high income and low income sectors

- Field research for quality assurance of activity areas

Ross, David P. "Income and Child Well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 1996. 19 Apr. 2010. <http://www.ccsd.ca/pubs/inckids/1.htm>.

Alachua County

Legend
— major_roads
▮ municipalities
▭ alachua_county_boundary

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Alachua County
Child Density Greater Than 20

Legend

Child Density
AGES 5-17

- 20 - 32
- 33 - 48
- 49 - 68
- 69 - 96
- 97 - 139
- 140 - 230
- 231 - 437

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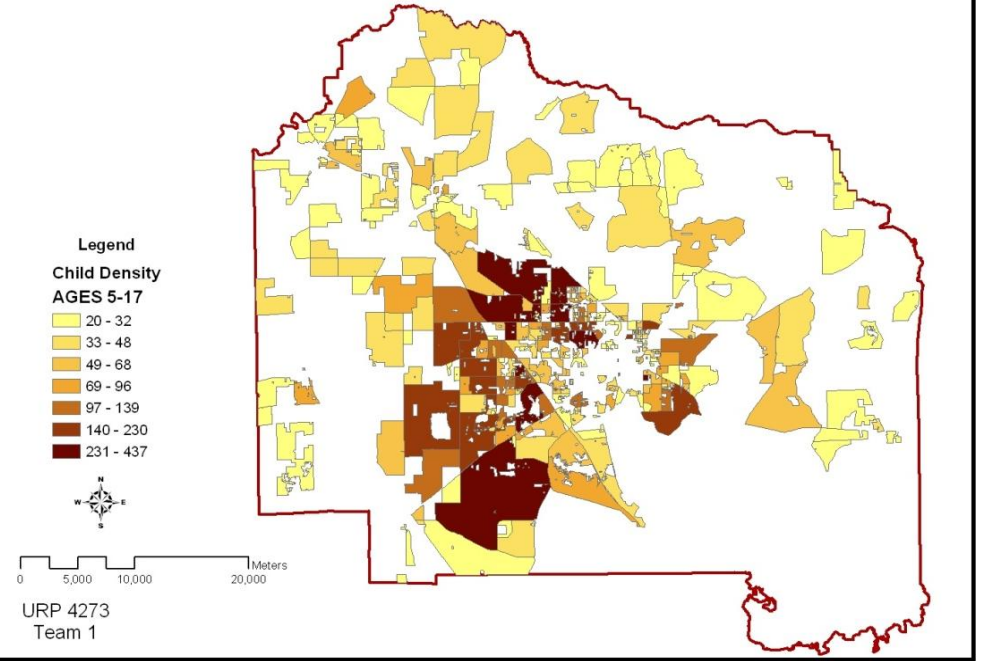
Alachua County
Socioeconomic Status

Legend

— Major Roads
▢ Municipalities

Census Block Groups
Income ($)

	3567 - 8680
	8681 - 11424
	11425 - 14595
	14596 - 18022
	18023 - 22129
	22130 - 28182
	28183 - 44107

Meters
0   5,000 10,000   20,000

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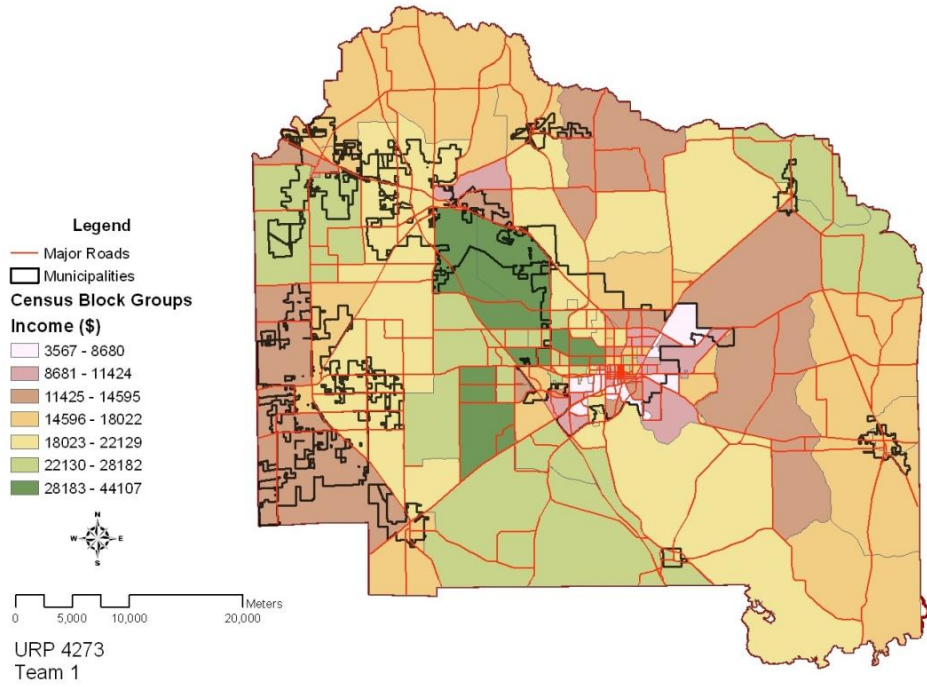
Alachua County
Child Activity Centers

Legend

▮ Parks
🏛 Cultural Centers
✝ Religious Centers
● Public Pools
⚑ Schools

Child Density
Ages 5 - 17

	20 - 32
	33 - 48
	49 - 68
	69 - 96
	97 - 139
	140 - 230
	231 - 437

See Urban Gainesville Map

Meters
0   5,000 10,000   20,000

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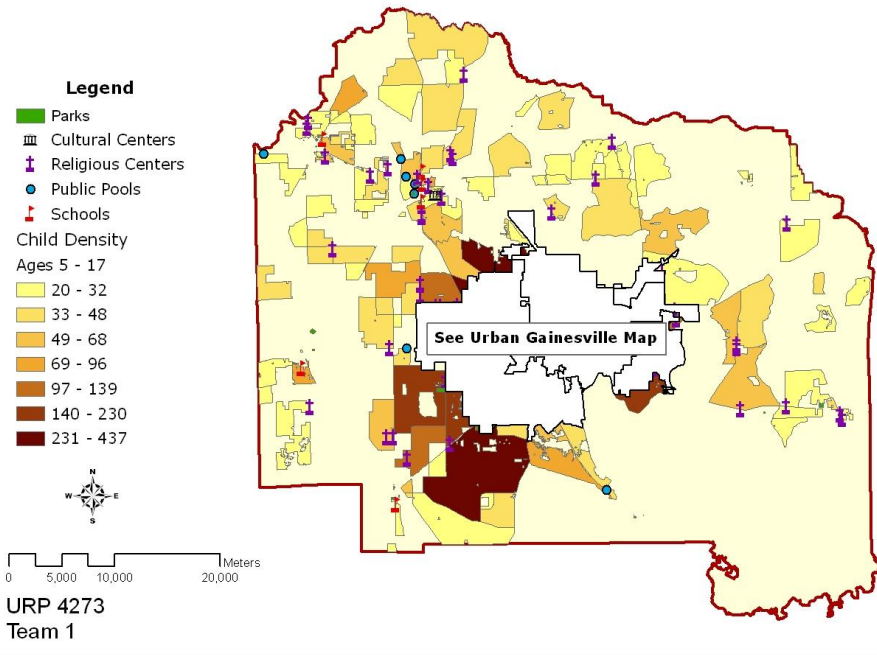
Child Activity Centers in Urban Gainesville

Legend

Cultural Centers
Religious Centers
Swimming Pools
Libraries
Schools
Parks

Child Density
Ages 5- 17

| 20 - 32 |
| 33 - 48 |
| 49 - 70 |
| 71 - 96 |
| 97 - 139 |
| 140 - 230 |
| 231 - 437 |

0 1,700 3,400   6,800 Meters

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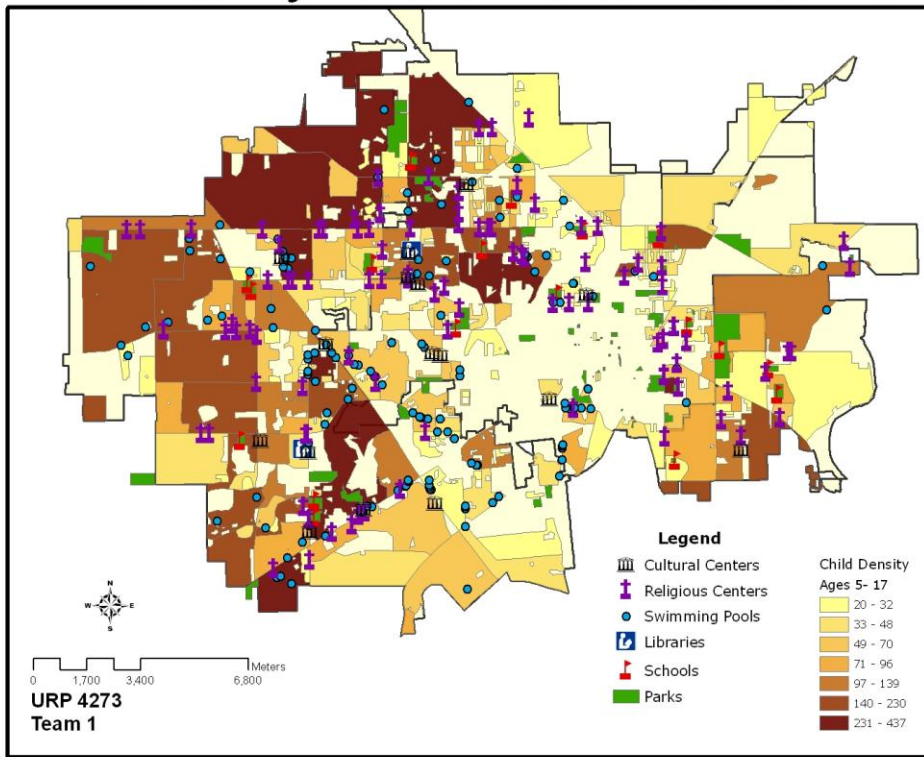
Alachua County Transportation

Legend

Bike Trails
Bus Stops RTS
Bus Routes RTS
Trails
Major Roads
Detailed Roads
Municipalities

0 4,450 8,900   17,800 Meters

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Lacrosse
High Springs
Waldo
Alachua
Gainesville
Newberry
Archer
Micanopy
Hawthorne

Alachua County Safety Concerns

Legend
- ● Superfund
- — Major Roads
- ▭ Municipalities
- ⌂ Fire Dept
- ▮ Brownfield
- △ Hazardous Waste
- ● Solid Waste

Crime Risk 2008
CRIME RANK
- 1 - 2
- 3 - 4
- 5
- 6 - 7
- 8 - 9

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Conclusions

The final maps are a display of the available transportation and after-school activities accessible by children in low- and high- income areas of Alachua County. In recent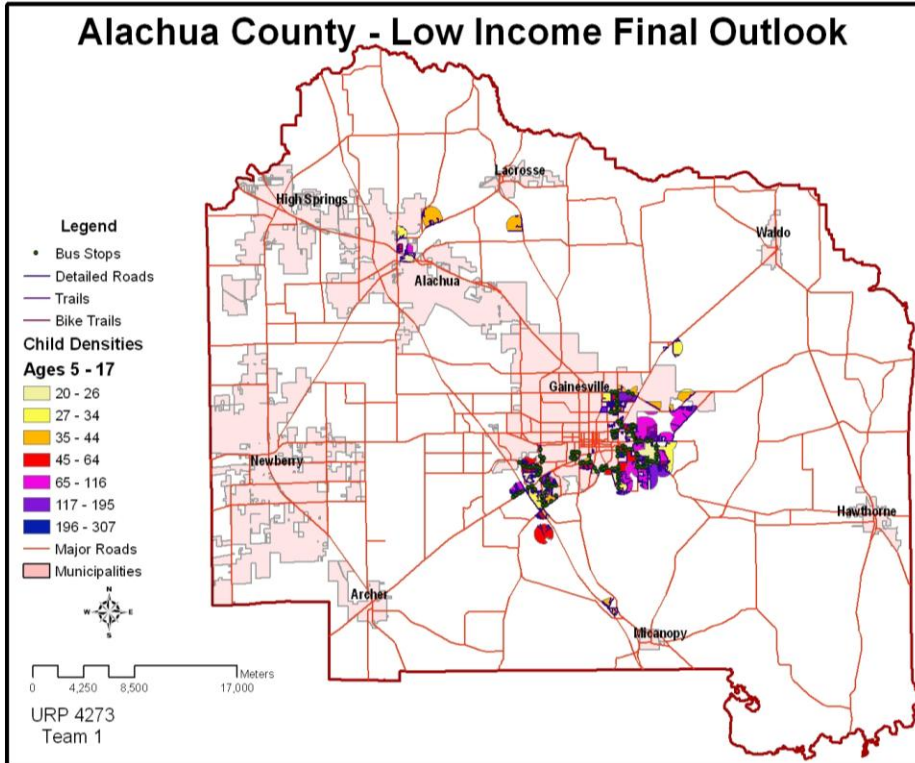 years, the initiatives of the Child-Friendly Cities at UNICEF and "The City of Children" project have prompted communities to consider city planning that benefits children. Children who grow up in child-friendly communities are more likely to be in better mental and physical shape than those that do not. Therefore, there needs to be a greater commitment to improving cities and making them suitable for children.

Alachua County - Low Income Final Outlook

Legend

- Bus Stops
- Detailed Roads
- Trails
- Bike Trails

Child Densities

Ages 5 - 17

- 20 - 26
- 27 - 34
- 35 - 44
- 45 - 64
- 65 - 116
- 117 - 195
- 196 - 307
- Major Roads
- Municipalities

High Springs
Lacrosse
Waldo
Alachua
Gainesville
Newberry
Hawthorne
Archer
Micanopy

0   4,250   8,500   17,000   Meters

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Alachua County - High Income Final Outlook

Legend

- Bus Stops
- Detailed Roads
- Trails
- Bike Trails

Child Densities

Ages 5 - 17

- 20 - 31
- 32 - 48
- 49 - 81
- 82 - 128
- 129 - 197
- 198 - 296
- 297 - 437
- Major Roads
- Municipalities

High Springs
Lacrosse
Waldo
Alachua
Gainesville
Newberry
Hawthorne
Archer
Micanopy

0   4,250   8,500   17,000   Meters

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