Community Center and Community Garden Collaboration

Finding potential sites for community gardens at existing community outreach centers in Greenville, SC



EES201 – Introduction to Geographic Information Systems – Spring 2012, Furman University, Greenville, SC

Greenville City Median Income



Abstract

The City of Greenville has dozens of community centers and gardens that are effectively serving their local communities. Greenville Forward, Gardening for Good, and Greenville Organic Foods Organization are non-profit organizations in Greenville dedicated to providing the Greenville community with fresh, local produce. Community gardens tend to be associated with organizations like churches, schools, and community centers. The purpose of this research is to determine which community centers within the city limits would be ideal locations for new gardens. Ideal locations for new gardens are in low-income, high population areas that do not currently have access to a garden. Benefits of introducing a community garden into a low income neighborhood include increased community involvement in politics, decreased crime rates, health benefits, food security, and further neighborhood beautification projects.

Introduction

Within the City of Greenville, there is a dense infrastructure of community programs in lower income neighborhoods. There are many established community gardens, along with established community centers owned by the City of Greenville and private non-governmental organizations (NGOs). Research shows that community gardens thrive when they are associated with community centers that provide services such as youth programs, food pantries, and emergency services. The goal of this project is to identify potential locations for community gardens in relation to currently operating community centers. Community centers include Greenville Park and Recreation Centers and community outreach centers run by NGOs.

Literature Review

Community gardens influence almost every aspect of a community's well-being and promote healthy behavior that can encourage positive growth and development in the community. Leigh Holland (2004) carried out an analysis of the community garden movement in the UK (p. 285). She discovered that community gardens are founded for a number of reasons, including vegetable growing for consumption, experimental permaculture plots, and concerns about health and education, all of which are "based in a sense of community" (p. 285). Holland points out that the multiplicity of the purposes of community gardens and their function in the development of the surrounding community should be better researched (p. 303). LaDona Knigge (2009) discusses how community gardens can become places of care and support, providing services for the local community that the welfare state generally provides (p. 4). Knigge shows how private organizations can work to revitalize areas that have declined economically by taking on the responsibilities of social welfare for members of their community (p. 5). Many gardens provide services far beyond what the garden provides (p. 2). After school and youth programs, tutoring, food and clothing "giveaways", emergency/refugee services, soup kitchens, fall fests, and other community activities are often housed in adjacent buildings to gardens and provide services that have been cut from government programs recently (p. 2 & 5). Knigge addresses leaders of non-profit organizations and local policy makers, hoping to encourage them to revitalize low-income, minority neighborhoods. Carrie Draper and Darcy Freedman (2010) reviewed 55 articles about community gardens in the US (p. 462). They concluded that community gardens strengthen the community by bringing together people of different races and backgrounds who would otherwise not communicate with each other. Relationships made in the garden moved outside the garden to help build a stronger sense of community in the neighborhood (p. 480). The authors discovered that the common themes appearing in community garden research were health benefits, food source/food security, economic development, youth education, development, and employment, use and preservation of open space, crime prevention, neighborhood beautification, leisure and outdoor recreation, cultural preservation and expression, social interactions/cultivation of relationships, and community organizing, empowerment, and mobilization (pp. 480-485). Gardens can behave as a catalyst to solving issues in the community (Armstrong 2000, p. 325). Particularly in low-income areas, people who participate in community gardens become more active in local politics. They form relationships and know whom to call to initiate projects to improve the community. Many other community programs are developed in association with the gardens and community beautification projects are often associated with community gardens (p. 324).

Methodology

Steps Taken: Import the 2010 Greenville County Block Group shapefile into ArcGIS Map. Collect addresses for all of the community gardens in Greenville. Obtain potential community garden addresses from Gardening for Good. Collect addresses of Greenville City sponsored community centers and other Greenville community centers found through Furman's Heller Service Corp website: http://www.hellerservicecorps.org/nonprofit-agencies.php . Import each set of addresses into batchgeo.com. Make a map and download as a kml. Convert the kml file to a layer file using the kml to layer tool. Import these shapefiles into ArcMap on top of the Greenville City Block Group shapefile. Download population data and median income data for block groups in Greenville County. Join these data files to the Greenville County Block Group shapefile. Make choropleth maps of population and median income in Greenville County and use as a basemap to show spatial distribution of gardens and community centers in relation to population and income. Identify census tracts that have low income levels and determine whether they are adequately being served by the community centers and gardens. Also determine areas with higher populations and determine whether they are being served. Identify block groups that need more attention based on population data and then based on median income data and suggest block groups and specific community centers that would benefit from community gardens.

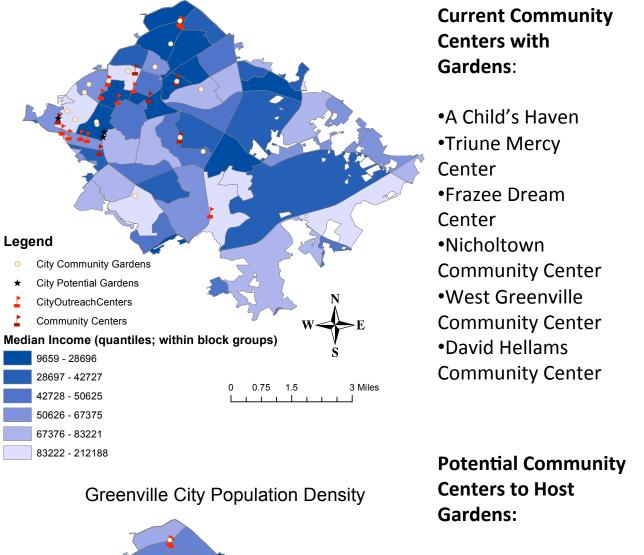
Future Research

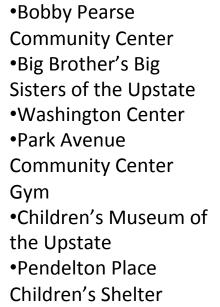
Most people spend the majority of their time in office buildings at work. Potential locations for community gardens could thus be located next to groups of office buildings, which would allow easy access to fresh produce as they leave work. On campus sites could use the food from the gardens to prepare lunches for people who live in the office buildings. Particularly during the summer when most types of produce are thriving, the gardens could provide a majority of produce needed for a kitchen. Businesses could partner together to provide a community garden for their employees. Employees could buy shares of the produce and thus support a staff member to run the garden. We have an example of this in Greenville already. The Greenville Organic Foods Organization has an office garden that is located next to their main offices and is maintained by staff. Studies show that people who exercise and eat right are more productive workers, so this could revolutionize America's productivity at the workplace.

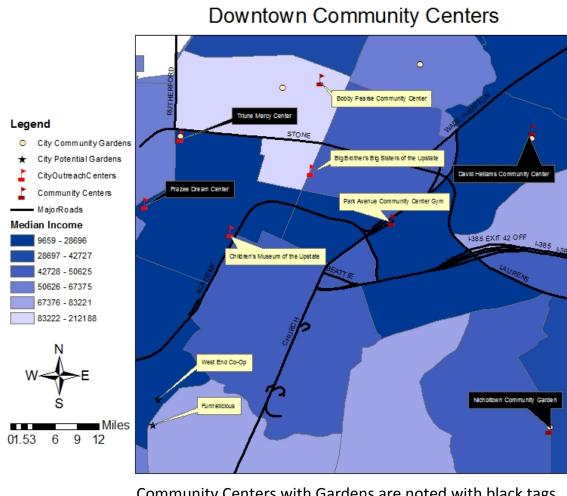
Acknowledgements

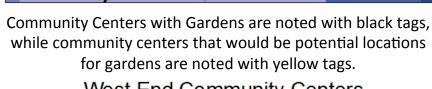
Thank you to Reece Lyerly's guidance and data from his organization Gardening for Good. Heller Service Corps databases.

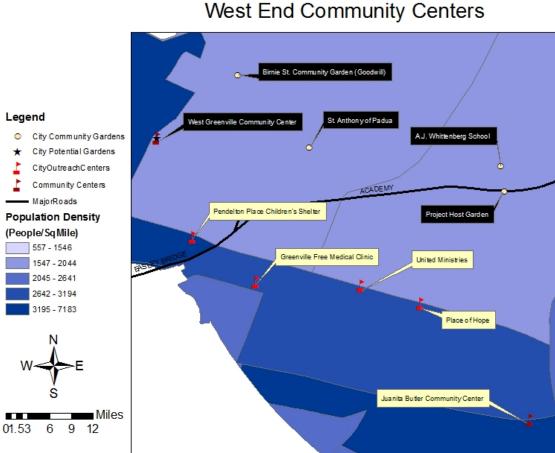
Results and Discussion

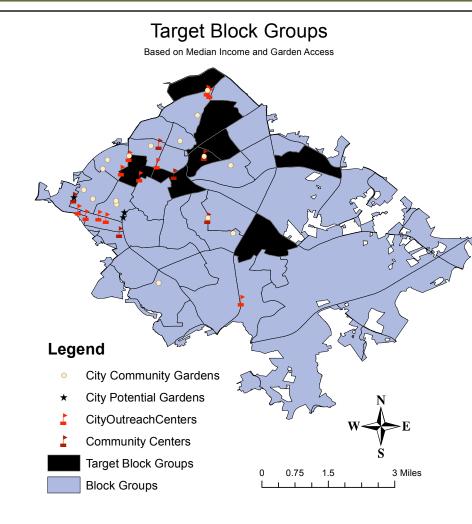


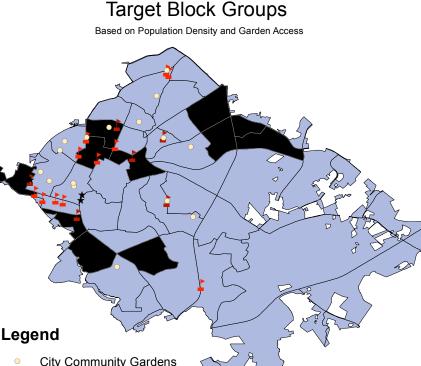


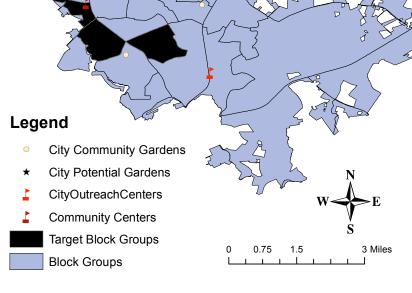












Conclusion

•Greenville Free

United Ministries

Medical Clinic

Target Groups Based on Population Density

0 0.75 1.5

City Community Gardens

★ City Potential Gardens

Community Centers

557 - 1546

1547 - 2044

2045 - 2641

2642 - 3194

3195 - 7183

City Population Density (Quantiles)

Population Density (People/SqMile)

Population Group: 3195-7183 people Block Group 1, Census Tract 7 Block Group 1, Census Tract 18.09 Block Group 2, Census Tract 21.05 Block Group 2, Census Tract 21.07 Block Group 2, Census Tract 22.01 Block Group 1, Census Tract 25.07 Block Group 2, Census Tract 28.05 Block Group 2, Census Tract 30.09 Block Group 2, Census Tract 39.02 Block Group 2, Census Tract 40.01

Block Group 2, Census Tract 44

Target Groups Based on Mediar Income Group: 9,659-28,696 Block Group 1, Census Tract 7

Block Group 1, Census Tract 9 Block Group 2, Census Tract 21.05 Block Group 1, Census Tract 22.01 Block Group 2, Census Tract 22.01 Block Group 1, Census Tract 23.02 Block Group 2, Census Tract 23.04 Block Group 1, Census Tract 43

Potential Garden Sites:

Bobby Pearse Community Center Big Brother's Big Sisters of the Upstate Washington Center Park Avenue Community Center Gym Children's Museum of the Upstate Pendelton Place Children's Shelter Greenville Free Medical Clinic United Ministries

Target Groups Based on Population Densit and Median Income and Garden Access Block Group 1, Census Tract 7

Block Group 1, Census Tract 22.01 Block Group 2, Census Tract 21.05

Data Sources

- 1) 2010 ACS 5 year population data and 2010 ACS five year estimate for the last 12 months median income data for block groups in Greenville, SC from http://factfinder2.census.gov/ faces/nav/jsf/pages/index.xhtml.
- 2) Block group shapefiles for Greenville County from http://www.census.gov/cgi-bin/geo/ shapefiles2010/main.
- 3) Garden addresses from Gardening for Good Membership Directory created by Reece
- 4) Community Outreach Center addresses from Heller Service Corps at http:// www.hellerservicecorps.org/nonprofit-agencies.php.
- 5) Greenville Community Center addresses from City of Greenville Community and Recreation Centers from http://www.greenvillesc.gov/ParksRec/CommunityCenter/ default.aspx.
- All geocoding done by importing addresses into batchgeo.com.
- All maps created with ESRI ArcDesktop 10 (2012).

References

Armstrong, Donna (2000). A survey of community gardens in upstate New York: implications for heath promotion and community development. Heath & Place (6) 319-327. Draper, Carrie, and Darcy Freedman (2010). Review and analysis of the benefits, purposes, and motivations associated with community gardening. United States in the Journal of Community Practice (18.4) 458-492.

Holland, Lee (2011). Diversity and connections in community gardens: a contribution to local sustainability. *Local Environment* (9.3) 285-305.

Knigge, LaDona (2009). Intersections between public and private: community gardens, community service and geographies of care in the US City of Buffalo, NY. Geographica Helvetica (64.1) 1-7.