

# New Day In The Garden

A Food Desert  
& Food Balance  
Analysis in

Savannah,  
Georgia

OCTOBER ♦ 2009



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## Overview



In 1912 in Savannah, Georgia, Juliette Gordon Low assembled 18 girls to help them achieve more balance in their lives. Her goal was to draw them out of isolated home environments into community service and the open air.<sup>1</sup> While the Girl Scouts of America were being born, cotton and tobacco were the fading kingpins of the South. Decades of dominance of these two crops had depleted southern soil. Combined with the devastation from earlier years of civil unrest, the local farming economy was nearly crushed. Balance and cultivation of what nature and community service have to offer were not only sought in the lives of young Savannah women but in regional agriculture, too. In response, scientists such as George Washington Carver pioneered new uses for peanuts, sweet potatoes and soybeans to advance diversification. Carver wrote practical bulletins filled with recipes and appeals to poor farmers to choose an assortment of “alternative crops” as a steady source of sustenance and as a way to improve quality of life. Cotton and tobacco could not fill a hungry belly, Carver said. Instead grow a variety of nutritious foods that one could actually eat as well as sell.

Agricultural diversification succeeded, but over the hundred years or so that followed, many of these Food Balance lessons were forgotten or lost, not just in the South, but all throughout the land, as we turned again to mass production of foods that we cannot directly eat or that are low in nutritional value. The current day disenfranchisement from Good Food in Savannah and the reliance on readymade fast food high in salt, fat, and sugar is similar to what has happened almost everywhere. Simply put, our food environment is out-of-balance. Reform of all types dominates the headlines as advocates, policymakers, and community members focus attention on how to make our nation healthier. Information is key, so for a long time in public health we focused on the mantra “eat five a day!” to reinforce the importance of fruits and vegetables. Today the Surgeon General says more is better. We all now agree that diet plays a key role in health outcomes. But we cannot choose these healthy foods unless we have access to them.

<sup>1</sup> [http://www.girlscouts.org/who\\_we\\_are/history/](http://www.girlscouts.org/who_we_are/history/).

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## THANK YOU

*Our sincere gratitude to everyone who contributed to this report and for all that they regularly do everyday to support a healthy, happy and prosperous Savannah.*

It's one thing to understand a problem generally, but solutions usually rely on specifics. What is the block-by-block food environment today in Savannah, are there areas that need improvement, and, if so, how can positive changes occur?

In July of 2009, Healthy Savannah retained Mari Gallagher Research & Consulting Group to conduct a Level One Food Assessment to address these questions. Those of you already familiar with our work know that we develop block-level measures for Food Deserts – large geographic areas with no or distant grocery stores – and Food Balance, an index measuring the ratio of mainstream to fringe food, also at the block level. We have also developed very specific definitions for mainstream and fringe food. A mainstream grocer is a place where you can support a healthy diet on a regular basis. A fringe food location is the opposite; it is not inherently bad, but if it is the primary food source, local diets and public health would likely suffer. Mainstream grocers need not be part of a major “full service” chain; total square footage is not important. Mainstream grocers can be independent and/or small food stores. The defining factor is that they sell an assortment of healthy and fresh foods that could sustain a balanced diet on a regular basis. A fringe food location is a fast food restaurant or any type of USDA-certified “Food Stamp store” that is not a small, medium or large mainstream grocer. A corner store or convenience store can be placed in either the mainstream or fringe category, depending on its food offerings. Other fringe stores can include pharmacies, crab houses, even liquor stores – if they are certified by the USDA to accept Electronic Benefit Transfer (EBT) cards or “Food Stamp” cards. Although those certified by the USDA are deemed to be the “first line of defense against malnutrition in the United States,” fringe stores primarily sell foods high in salt, fat, and sugar and have very limited if any nutritional value.

<b>Food Balance Theory</b> (MG copyright applies) As communities become more out-of-balance in terms of food options, negative diet-related health outcomes increase, holding constant other key factors.	
<b>Food Balance Score description</b>	<b>Examples</b>
Far above 1: <b>High score and worst outcome</b>	Mainstream food venue is 1 mile away, and fringe food venue is .5 mile away $1/.5 = 2$
Around 1: <b>Average score and Average outcome</b>	Mainstream food venue is 1 mile away and fringe food venue is 1 mile away $1/1 = 1$
Far below 1: <b>Low score and best outcome</b>	Mainstream food venue is .5 miles away and fringe food venue is 1 mile away $.5/1 = .5$

For Savannah, upon conducting the analysis, our overall findings point – not to Food Deserts – but to Food Balance, specifically where there are out-of-balance zones. Because Savannah has areas that greatly differ in type of geography and population density, simply looking at grocer distance distribution can be misleading for this reason and several others. **In Savannah, we found Food Balance to be the more**

**appropriate lens through which to assess food offerings.** Our Food Balance Scores, which we found to be a predictor of diabetes in other locations across the U.S., can be meaningfully compared across all of Savannah. They show a relative measure of how easy or how difficult it is to reach mainstream food over fringe food. This relates to a new body of our work called the Convenience Food Factor. The underlining principle is that consumers will shop most regularly at the food sources closest to them even if they prefer or require for medical reasons other types of more distant food.

Consider where you live. Can you buy fresh, skinless chicken as easily as ready-made fried chicken? Can you buy whole, raw potatoes as easily as French fries, high-salt chips, candy, and soda? Can you buy fresh tomatoes or only ketchup?

**The report is entitled “New Day in the Garden” because the findings call for a return to the basics in Food**

**Balance**, a return to our roots as a civilization that can produce and consume healthy foods, a return – one might say – to a very simple garden.

Savannah is already a city of beautiful gardens, lush plants, whispering trees and lovely statues and fountains. Yet in modern society it is easy to overlook a garden’s most meaningful purpose: the cultivation of nourishing food.

**We consider this document a working report.** Please note that time and resources were limited, that no dataset is perfect, and that food stores will continue to open and close,



*Above is one of Savannah’s most famous statues: Bird Girl. Although it was not originally created in Savannah, it is housed and associated with the City, made famous by its placement on the cover of the book, “Midnight in the Garden of Good and Evil.” The statue inspired us to create its modern day version (next page) as it relates to present day opportunities in Food Balance and food choices. The cover of our report was inspired by the look and layout of the lobby of Savannah’s historic City Hall and gold dome. In “New Day in the Garden,” the time is not midnight, but high noon.*

making the maps only a static picture of one moment in time in the history of Savannah.

“New Day in the Garden” invites a brand new chapter – a new beginning – guided by a Good Food Action Plan and committed community, civic, government, philanthropic and private sector leaders to carry it through.

It is not just about community gardens or farmers markets, but about grocery store development, corner store improvement, exercise, personal responsibility and much more.

Our Food Balance illustration represents the ability to choose mainstream food (on our right) over fringe food (on our left). Developing good food choices paired with education, especially in out-of-balance areas, is one of the greatest opportunities ahead for Healthy Savannah.



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MARI GALLAGHER

RESEARCH & CONSULTING GROUP

*New Day In  
The Garden*

*Savannah,  
Georgia*

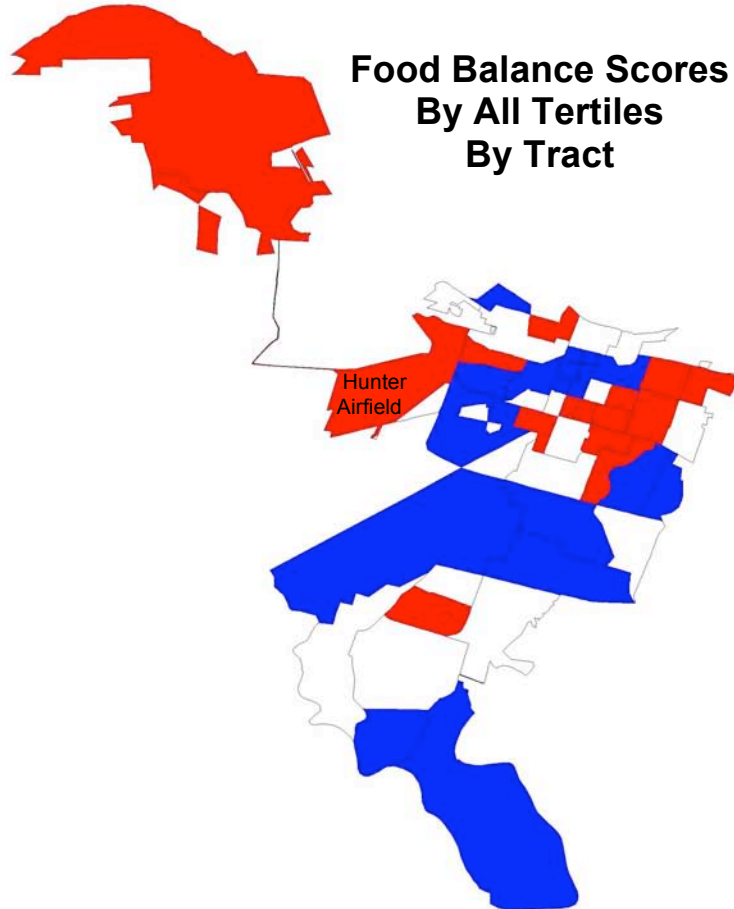
Level One Report ♦ PAGE 5

## Findings

The following maps show our detailed findings from the analysis conducted for every block in and surrounding Savannah. As the map shows, the areas in red are the most out-of-balance in terms of food offerings. As you will see with the block-level detail, the majority of one of these red zones contains Hunter Army Airfield. Healthy Savannah might consider excluding this tract for that reason.

### WHAT ARE TERTILES?

Tertiles consist of sorting the data from lowest to highest and separating them into thirds.



■ Worst tertile by tract

□ Middle tertile by tract

■ Best tertile by tract



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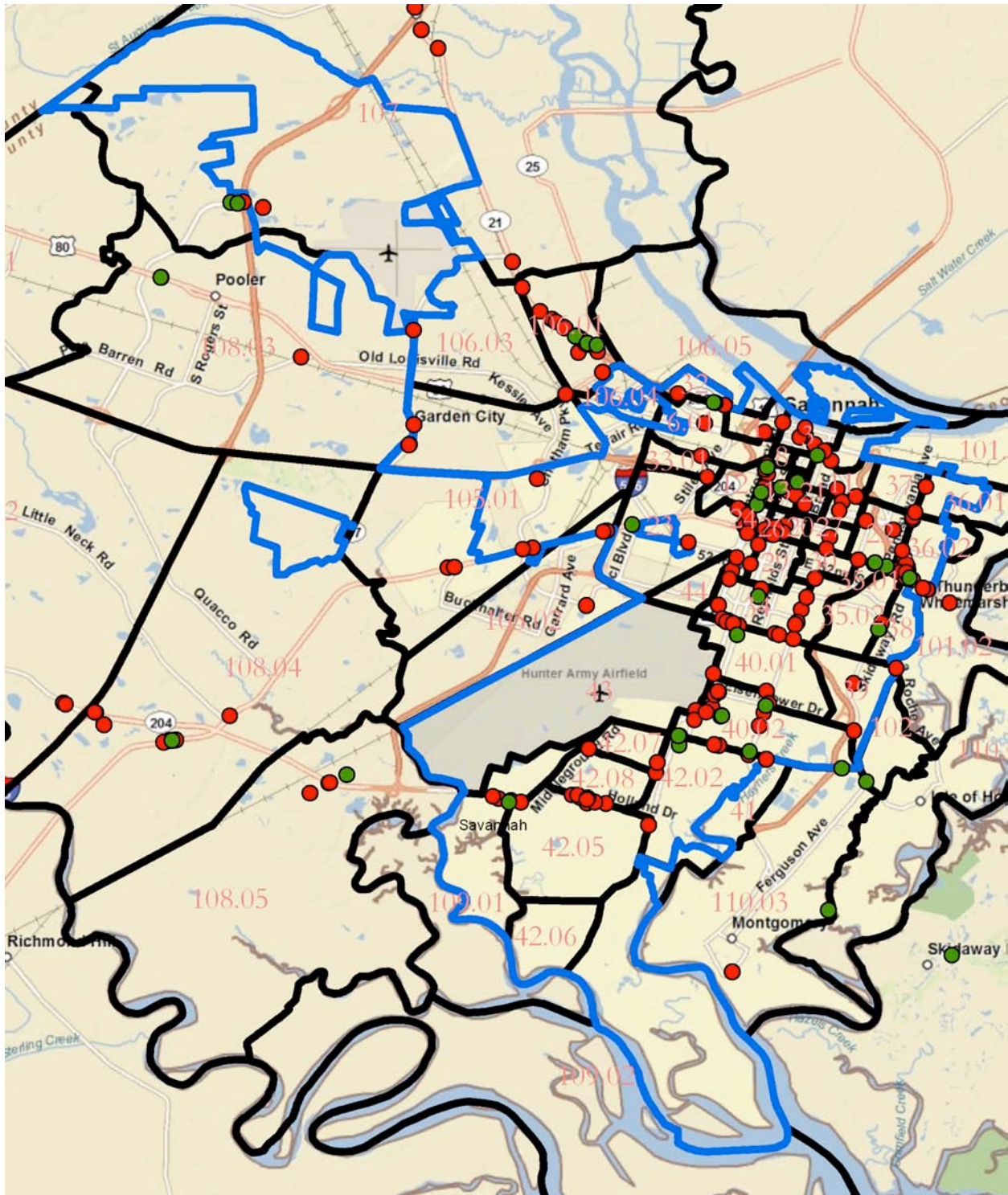
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*New Day In  
The Garden*

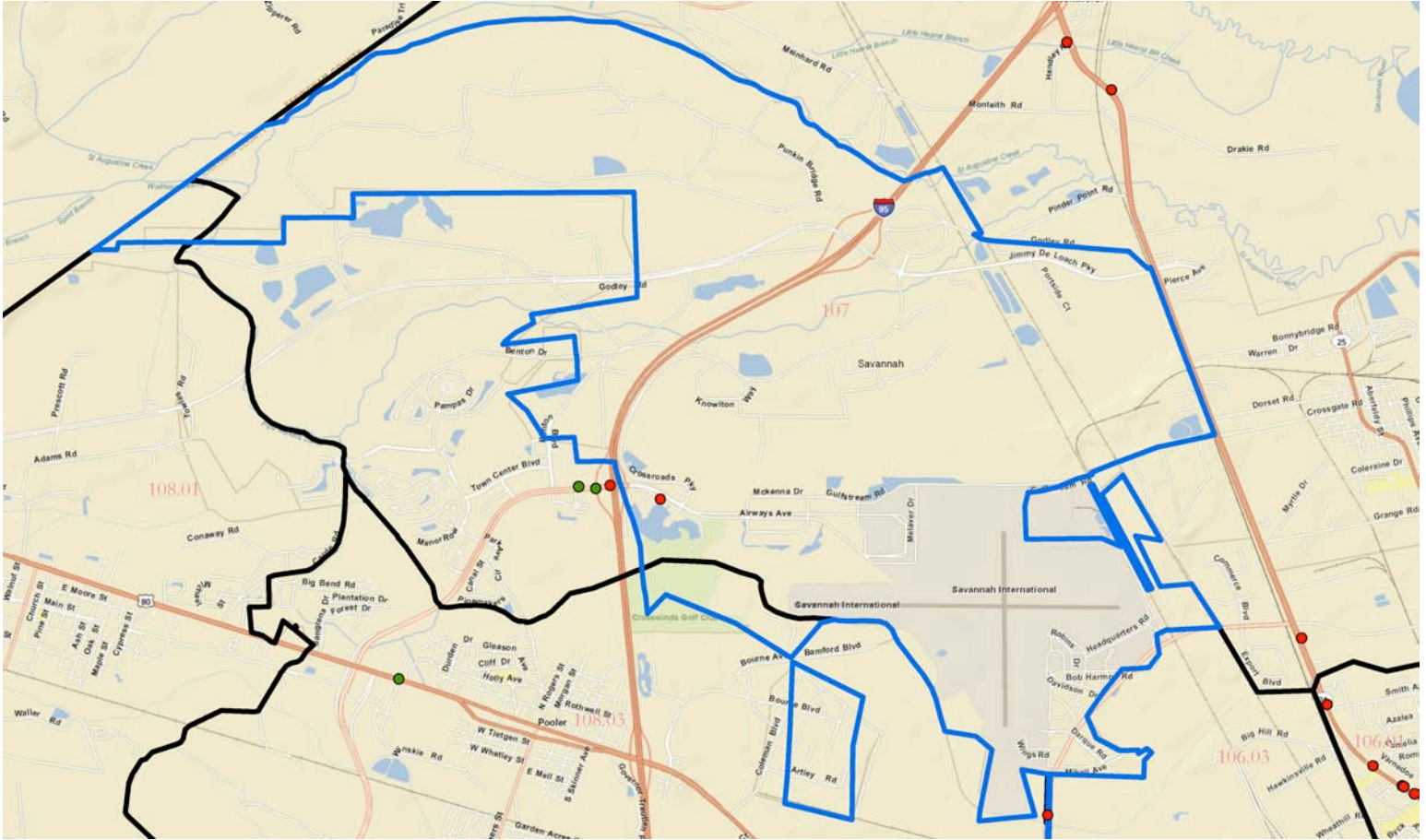
*Savannah,  
Georgia*

- Mainstream small, medium or large grocers
- Fringe food venues in
- ▭ City of Savannah
- ▭ Census tract boundaries



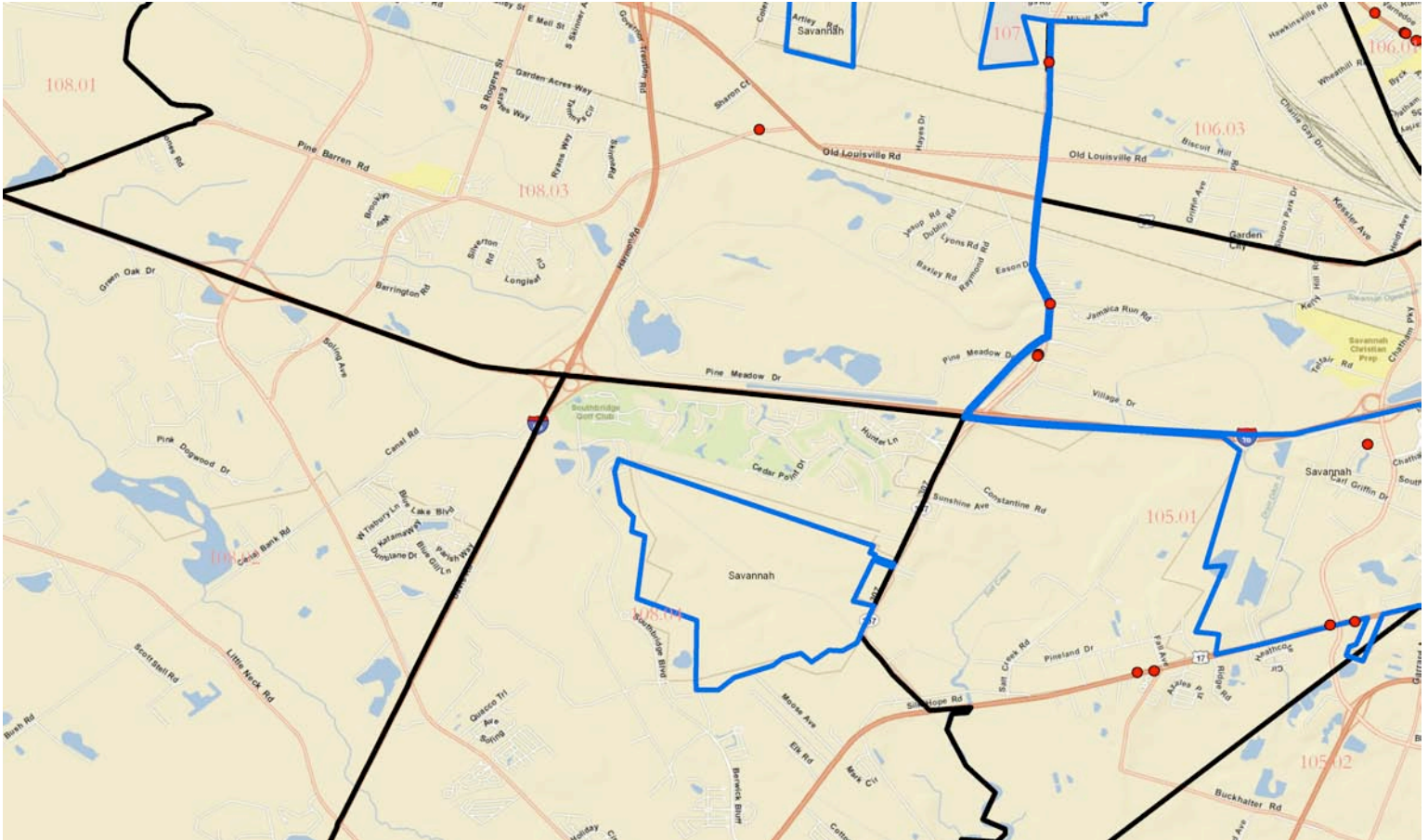
# Northwest Savannah

- Mainstream small, medium or large grocers
- Fringe food venues in
- ▮ City of Savannah
- ▮ Census tract boundaries



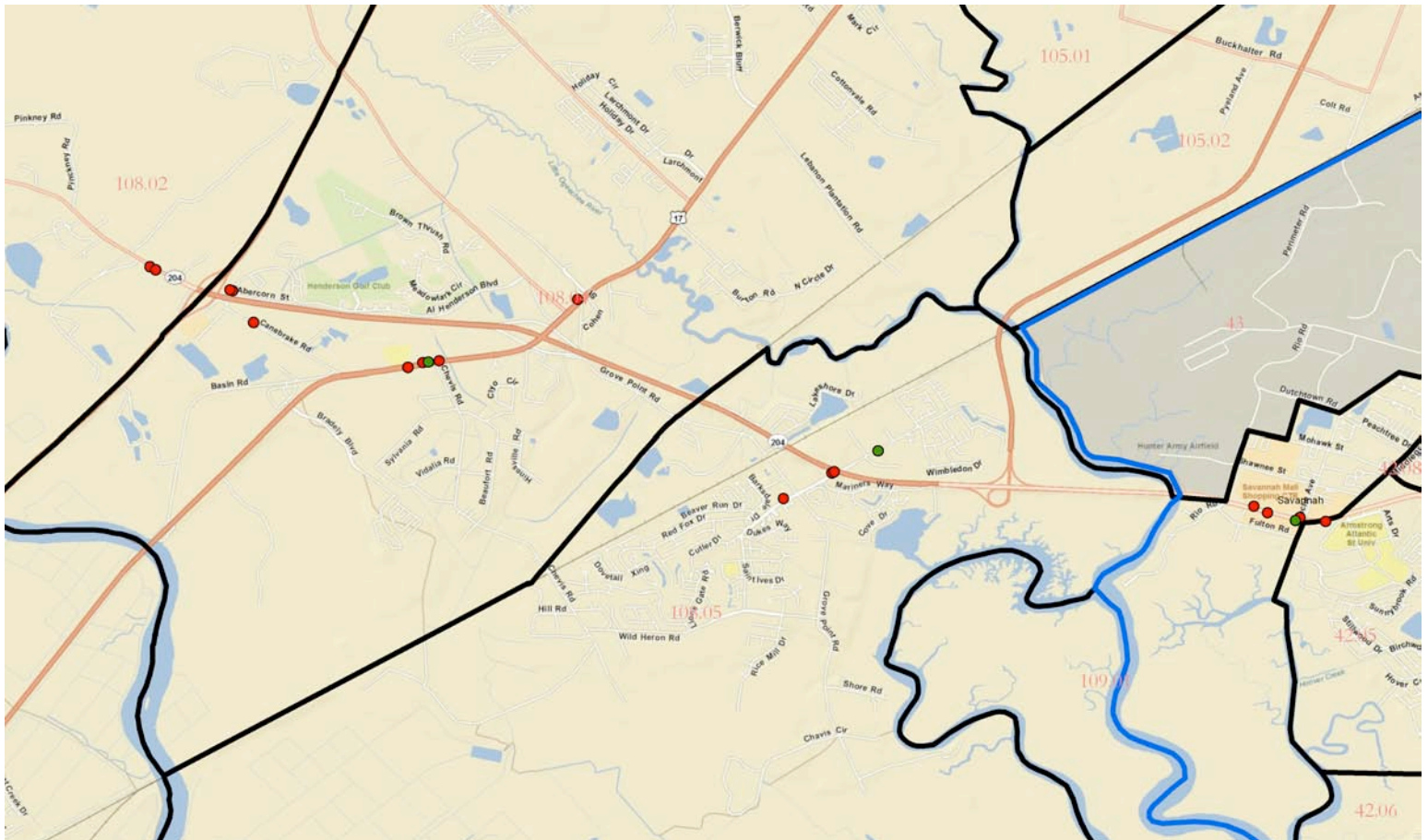
## Middle West Savannah

- Mainstream small, medium or large grocers
- Fringe food venues in City of Savannah
- ▮ City of Savannah
- ▮ Census tract boundaries



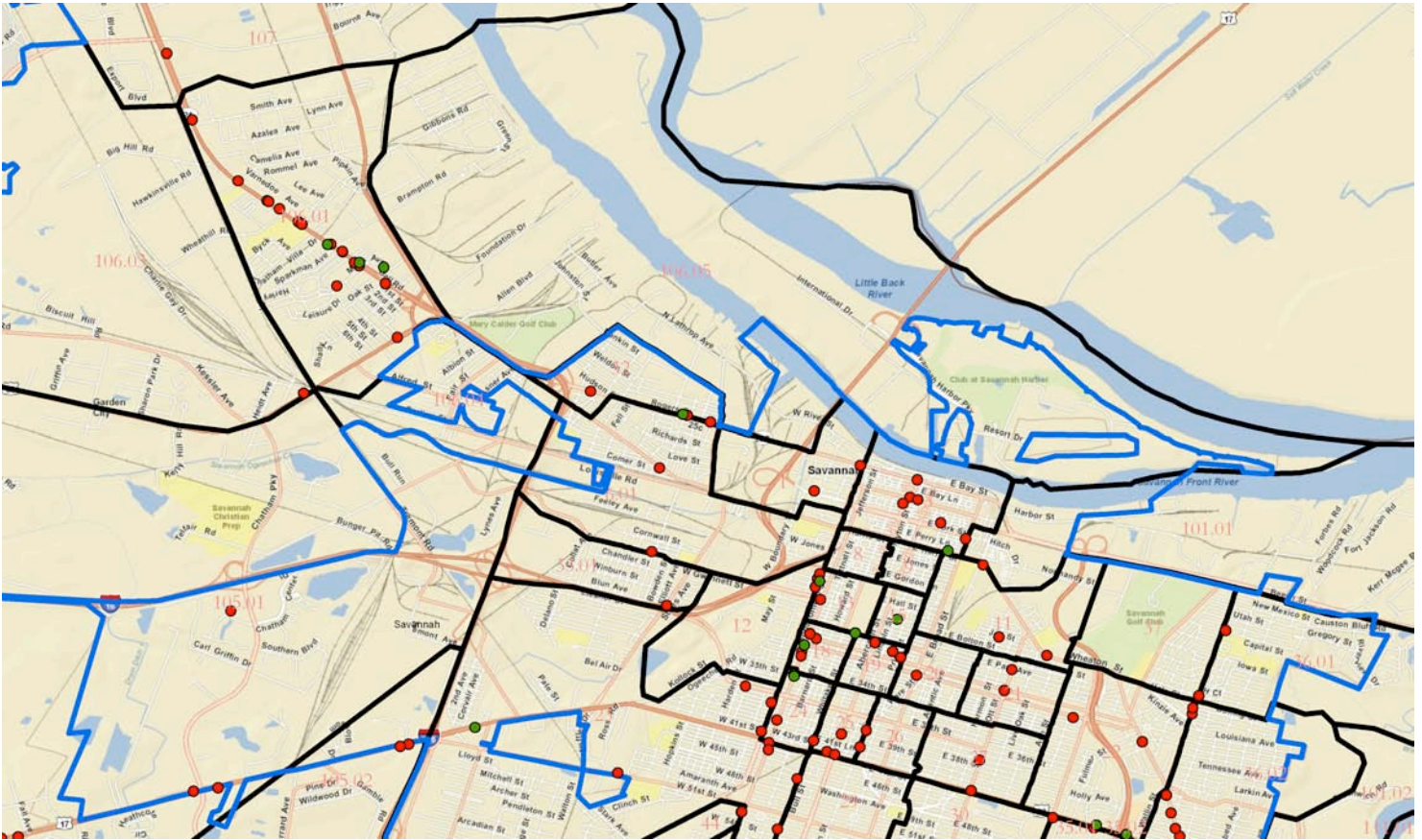
## Southwest Savannah

- Mainstream small, medium or large grocers
- Fringe food venues in
- ▭ City of Savannah
- ▭ Census tract boundaries



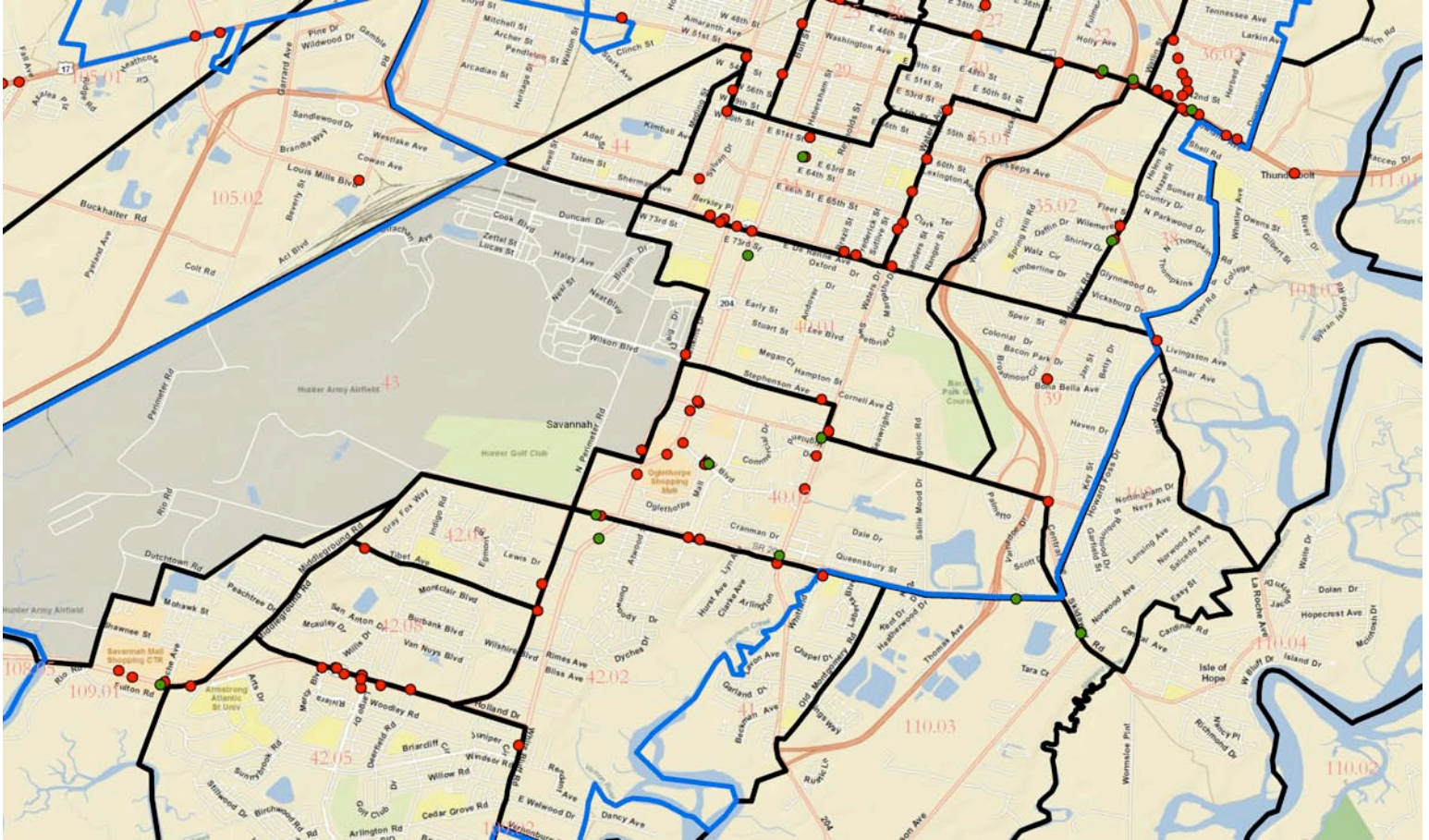
# Northeast Savannah

- Mainstream small, medium or large grocers
- Fringe food venues in
- ▭ City of Savannah
- ▭ Census tract boundaries



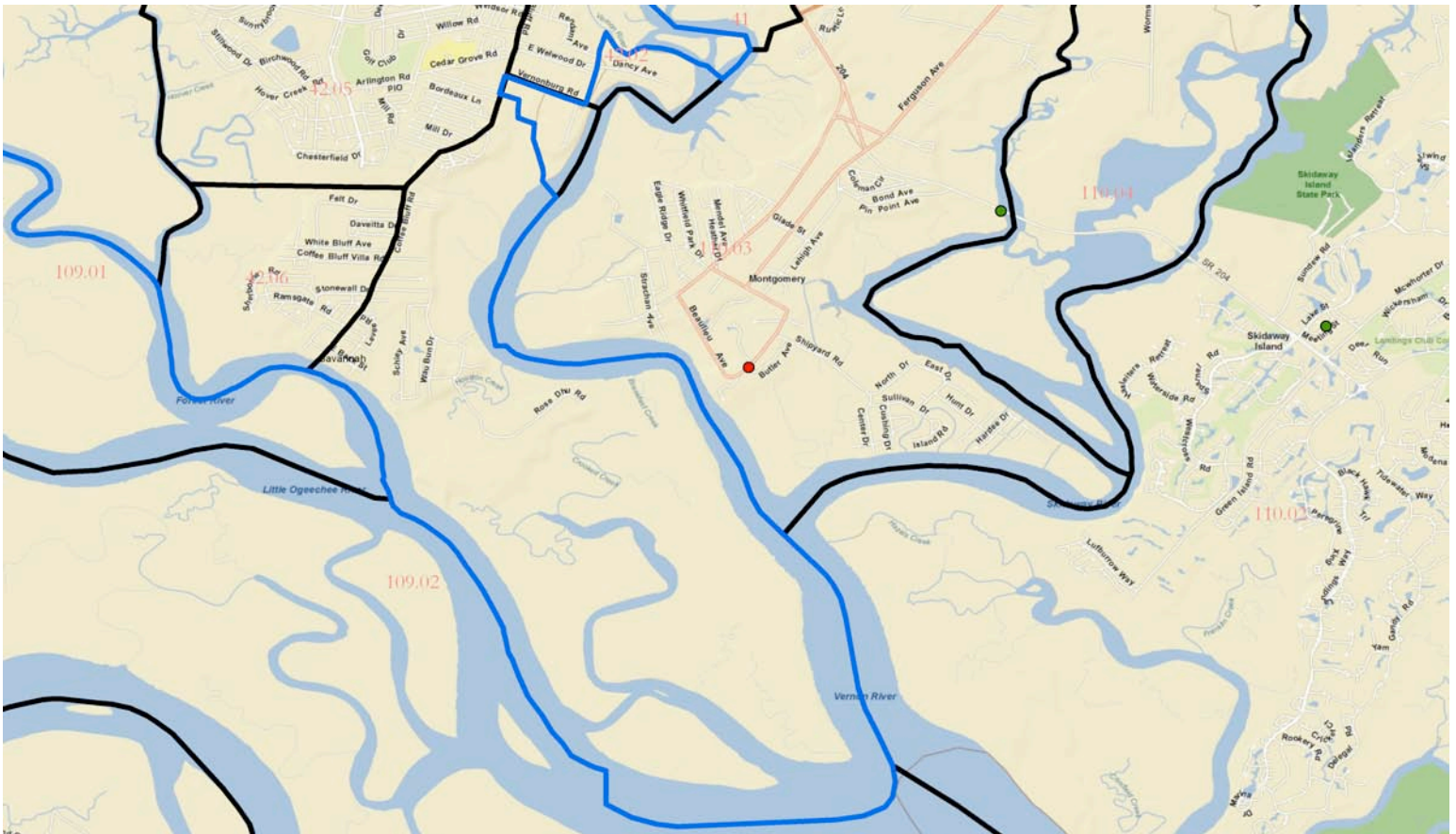
# Middle East Savannah

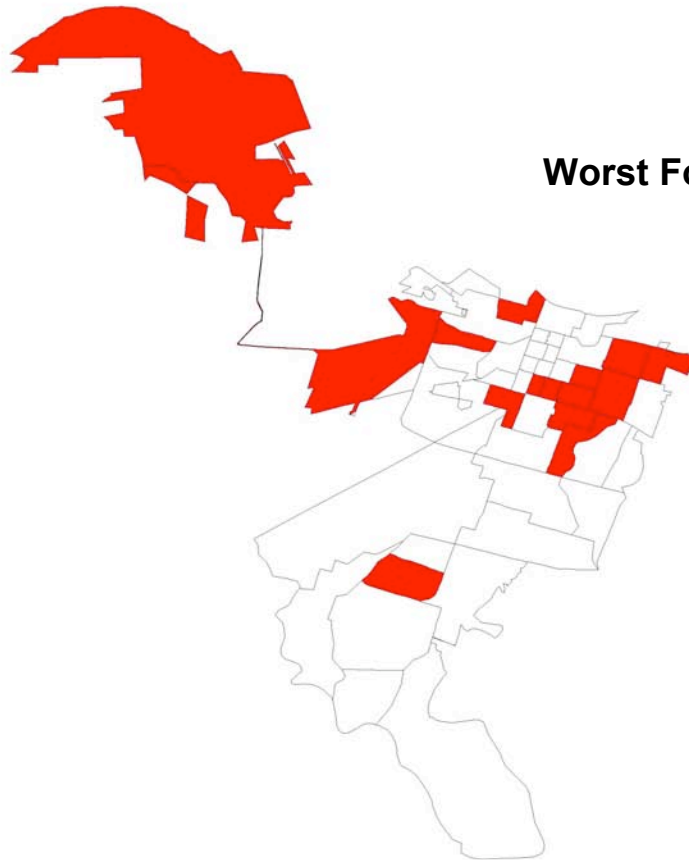
- Mainstream small, medium or large grocers
- Fringe food venues in
- ▭ City of Savannah
- ▭ Census tract boundaries



## Southeast Savannah

- Mainstream small, medium or large grocers
- Fringe food venues in City of Savannah
- ▮ Census tract boundaries



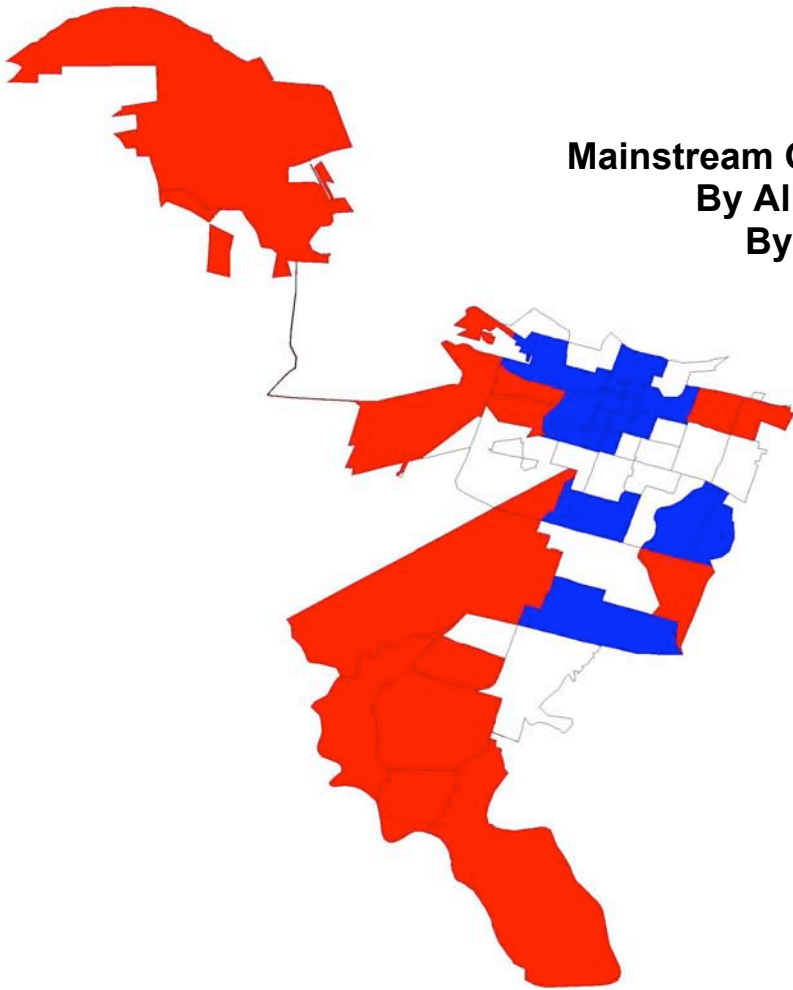


### Worst Food Balance Tertile By Tract

Here we show only the most out-of-balance areas. It is useful to refer to the preceding map to have an orientation of the various neighborhoods affected.

- Worst tertile by tract (most out-of-balance)
- Middle and low tertiles by tract





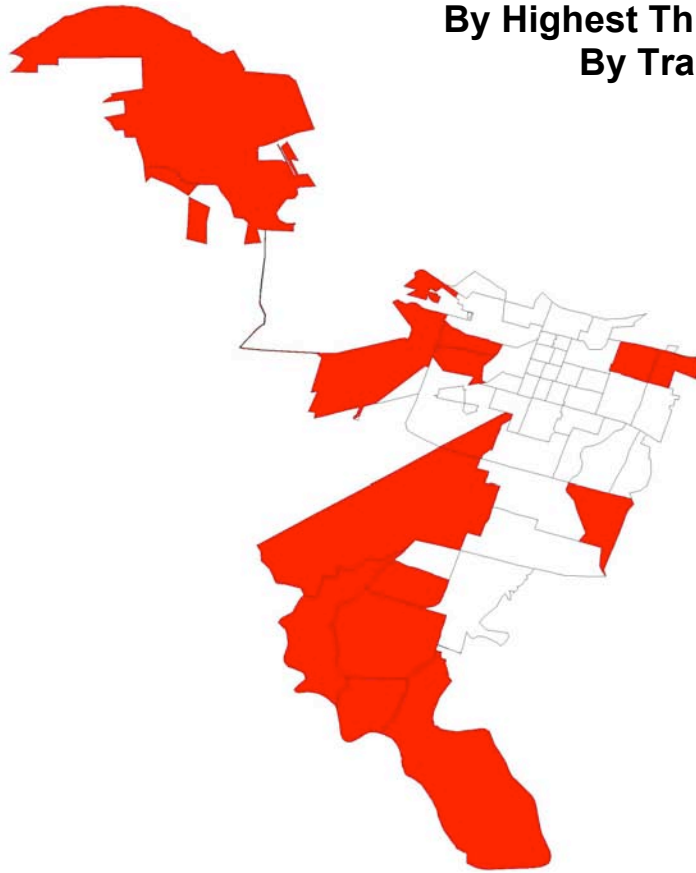
### Mainstream Grocer Distance By All Tertiles By Tract

Here we show grocer distribution patterns. However, because Savannah has areas that greatly differ in type of geography and population density, simply looking at grocer distance distribution can be misleading for this reason and several others.

- Worst tertile by tract (farthest distance)
- Middle tertile by tract
- Best tertile by tract (closest distance)



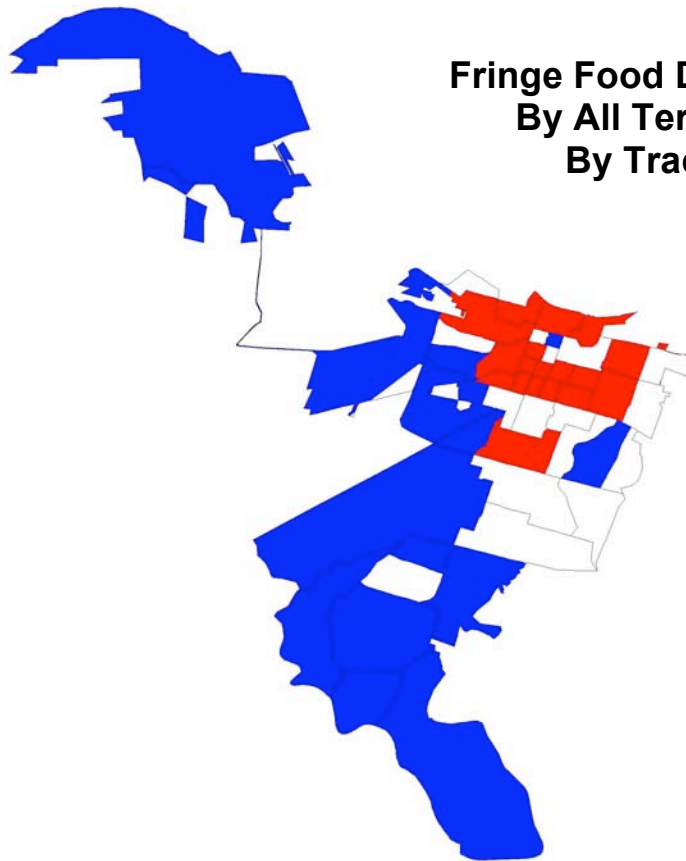
## Mainstream Grocer Distance By Highest Third Tertile By Tract



■ Worst tertile by tract (farthest distance)

□ Middle and best tertiles by tract



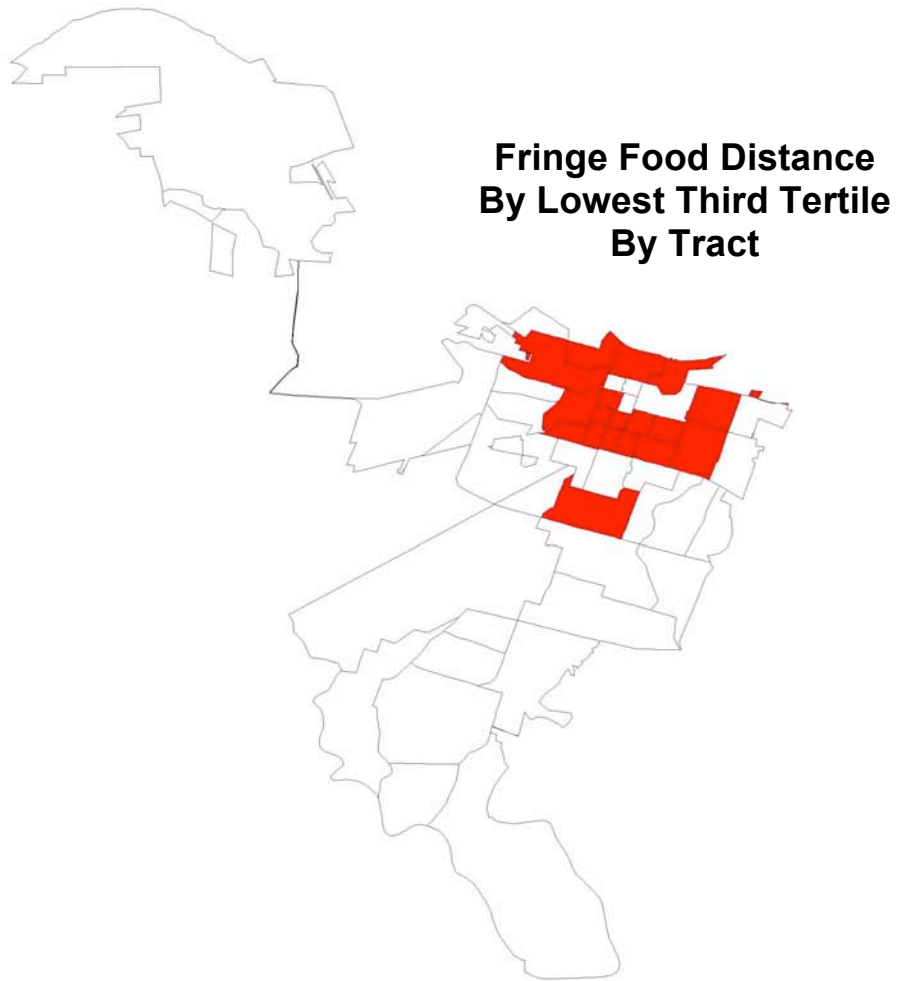


**Fringe Food Distance  
By All Tertiles  
By Tract**

Please note that fast food is included in fringe food, but fringe food does not consist solely of fast food. This means that fringe food outlets such as USDA certified convenience stores, crab houses and so on are included in this map.

- Worst tertile by tract (closest distance)
- Middle tertile by tract
- Best tertile by tract (farthest distance)





- Highest tertile of fast food by tract (closest distance)
- Middle and low tertiles of fast food by tract



## Methodology & Data Development

The MG team was retained to conduct a Level One Food Desert & Food Balance analysis for Savannah, Georgia. Our methodology begins with a very simple premise: that the vitality and health of Savannah is a block-by-block phenomenon. When we think of concepts such as “home” and “community,” we typically think of the very block where we live, and whether or not it is a well-balanced, life-supporting environment. We begin our study of food access and health outcomes at the block level for this reason.

Food venue data was developed for non-zero population Census-defined blocks for the City of Savannah and a ring immediately around Savannah. We used USDA “Food Stamp” retailer data, online retailer data, municipal land use data, and field checks as our core sources.

To calculate the average distance to a food venue (such as a grocery store or fast food restaurant), we measured the distance between the geographic centers of each block and the locations of each food venue in the vicinity. The distance from the center of each block to each food venue was calculated, using the latitude and the longitude of each food venue and of each block center. Of these distances, the minimum distance was calculated for each block, representing the distance from that block to the nearest food venue by category: small, medium and large mainstream grocers and fringe food, which can be fast food or a USDA “Food Stamp store” that is not a small, medium or large grocer. For each block, a weight was created to reflect the share of the city's population living in that block. The average distance is the weighted average of the distance from each block to the nearest food venue, with greater weights given to blocks with larger numbers of residents. The distance score, calculated in miles, is the distance the average person from that block would need to travel to reach a food venue.

A corner store or convenience store can be placed in either the mainstream or fringe category, depending on its food offerings. Other USDA “Food Stamp stores” can include pharmacies, crab houses, even liquor stores – if they are certified to accept Electronic Benefit Transfer (EBT) cards or “Food Stamp” cards. If an establishment is a crab house, for example, and is certified through the USDA, we include it in our data. If it is not part of the USDA “Food Stamp” program, we exclude it.

All traditional fast food, such as McDonald’s and KFC, are included in our fringe category.

We also calculated our Food Balance Score, a body of work developed exclusively by our firm: the distance to any mainstream food provider divided by the distance to any fringe food venue. The average ratio for the entire city, a ZIP Code, a Community Area, or a census tract, is the weighted average of the ratios for each block, with greater

weight given to blocks with larger numbers of residents. We call this ratio the Food Balance Score and the larger body of work the Food Balance Effect.

**We consider this document a Level One working report and we emphasize that time and resources were limited, that no dataset is perfect, and that food stores will continue to open and close.** Food stores might also make improvements, raising their status from fringe to mainstream. Or they might change their “Food Stamp” retailer status. Market movement means that maps – dot maps especially – should be used with caution as they can become quickly out-of-date. Furthermore, dot maps might be missing data as we find that **retailer data is often incomplete and as we did not have the resources to conduct extensive field checks and store inspections.** So a few food venues listed as mainstream might actually be fringe, for example. Furthermore, we found that **some store types that in other markets normally accept EBT to not necessarily all accept EBT in Savannah,** so they were not present in the USDA database. This could further skew the findings.

## Conclusion & Recommendations

“New Day in the Garden” invites a brand new chapter – a new beginning – guided by a Good Food Action Plan and committed community, civic, government, philanthropic and private sector leaders to carry it through. To that end, Healthy Savannah might consider the following list of potential actions:



1. **Expand this analysis to include a statistical linking with diet-related death and other health data.** This will make it possible to apply the new metric we developed called *Years of Potential Life Gain* to predict how new grocery store development, corner store improvements, farmers markets and so on would contribute to additional life gained due to a mainstream food presence, rather than life lost due to its absence, while accounting for other contributing factors such as income, race and education. Government could then use the analysis to further prioritize resources and incentives based on health impact.
2. **Improve corner stores.** There are many fringe food outlets in Savannah. Even while supermarkets in some locations are scarce, neighborhood corner stores, “gas station” markets and other outlets have either never sold healthy foods or transitioned away from them to specialize in cigarettes, lottery tickets, alcohol, and limited prepackaged food high in salt, fat and sugar. However, these fringe stores have an advantage: they already exist. Targeting existing corner stores is a particularly promising strategy for improving nutritious food access. Many of the

start-up obstacles have already been conquered: rent and utilities are paid and often the owner has some level of rapport with the surrounding community. Larger commercial chains can collaborate with small stores: invite corner stores to carry the large chain's brand or logo. The larger store can also act as a mentor to the smaller store, advising them on which products to choose and helping them with purchasing. Additionally, non-profit groups, such as those that facilitate farmers markets, can consider offering vendor carts that sell produce and other healthy foods inside the fringe store to help the store test if there is a sustainable market for healthier perishables.

3. **Incent new mainstream grocer development in key locations.**
4. **Use this data and analysis to identify which new and existing grocers deserve incentives.** Some areas might indeed offer untapped, profit-making opportunities and suitable sites for development and expansion. However, there are indeed other areas where population density and buying power might be too low to meet required profit margins. In those cases, subsidy is needed to make store development feasible. Municipalities working to improve healthy food access through new store development should first empirically demonstrate which food sites the market alone can support and which sites require public subsidy. Once sites deserving public subsidy are identified, those sites should be prioritized based on clear-cut measures. Based on our work, we find that it is more effective to spread limited resources and incentives across fewer high-impact sites, rather than spread the same level of resources thinly across a great number of sites.
5. **Identify and secure appropriate city incentives.** This can include low-cost or free land, tax credits to new grocery store developments, and low interest loans or lines of credit to corner stores to support improvements such as new refrigeration systems or the development of new lines of produce and other healthy perishables.
6. **Identify additional incentive/financing resources,** such as a state-supported financing fund (for Savannah and all of Georgia) as well as federal funds.
7. **Review how zoning policy** and potential changes to zoning can support increased access to healthy foods.
8. **Identify traffic routes, especially pedestrian pathways,** to mainstream food venues and identify ways to shorten and improve those routes. The dot maps showing the locations of mainstream and fringe food venues will aid in prioritizing where to start on this task.

9. **Convene a Grocer Expo** where incentives, prioritizes and strategies can be showcased. Consider identifying specific priority sites.
10. **Strengthen and expand farmers and community markets.** Connect the farmers to local opportunities to place and sell produce and other farm products, such as in schools, hospitals, restaurants and other points of distribution.
11. **Identify city land appropriate for urban agriculture programs** and help make the land and programs a priority and reality.
12. **Link food access and urban agriculture programs with jobs programs.**

13. **Improve street vendor offerings.**

Government and foundations could subsidize the start-up costs of buying and selling fruits and vegetables in public spaces. Perhaps this is done as a pilot project through a nonprofit. Instead of soft pretzels, fried peanuts, soda and candy bars, imagine a vendor who sells apples with dip, fruit plates, peaches, and bottles of water. Consider “mini-markets” –



new street vendors that are farmer’s markets on wheels. Big grocery store chains could use them as a billboard of sorts. Put the chain’s logo at the top of the cart and place this cart in the middle of plazas where people gather for lunch, or areas where workers congregate on their breaks. Even if the cart is small, it would be convenient and people could quickly buy the necessary produce for their evening meal or for an on-the-spot snack.

14. **Consider mobile grocer options.** Other cities are developing programs with busses or trucks that carry and sell high quality food and that make regular, dependable visits to underserved areas.
15. **Involve multiple governmental agencies synergistically.** In addition to those who control departmental budgets, include and integrate additional and diverse city staff, including those involved in community planning, zoning, health, social services, business development and education so that – together – they can create clusters of good food, exercise, health, and job opportunities for Savannah residents most in need.

16. **When hosting large meetings and events, make it your policy to offer healthy foods and beverages** such as fruit, juice and water instead of donuts, cookies and soda. Let the unhealthy snacks be the exception, not the rule. By doing this you impact many people at once and lead by example.
17. **Identify other strategies and policies** that increase Food Balance and good food choice. This would likely make a positive impact on many Savannah residents, including many children.

*Our sincere gratitude again  
to everyone who contributed to this report  
and for all that they regularly do everyday  
to support a healthy, happy and prosperous  
Savannah.*

