

Suburban Food Deserts: Islands of Food Insecurity in Seas of Affluence

A Case Study of Butler County, Ohio

Robbyn J.F. Abbitt, GISP

GIS Coordinator

Miami University

Daniel T. Remley, MSPH, PhD

Extension Educator

OSU Extension



GIS Health Conference

October 18, 2010

What is a Food Desert?

- First used in Scotland in the 1990s to describe the public housing sector
- In literature...
 - “a socially distressed neighborhood with relatively low average household incomes and poor access to healthy and affordable food.” (Larsen & Gilliland 2008)
- USDA
 - Areas with limited access to affordable and nutritious food
- Even Wikipedia

Why Butler County?

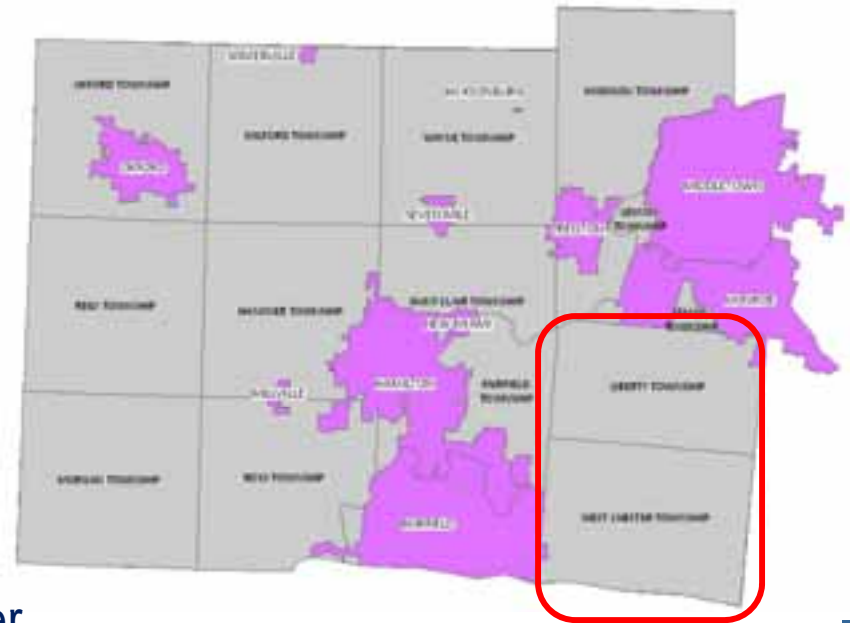


- Daniel Remley, OSU Extension Educator
 - Family & Consumer Sciences
 - Community Development
- “.... One of our initiatives is to **identify "food deserts"** in urban and suburban areas and then **develop community projects** to address these areas. The idea would be to **improve access to fresh produce** through development of community gardens, farmers markets, choice food pantries, etc.”



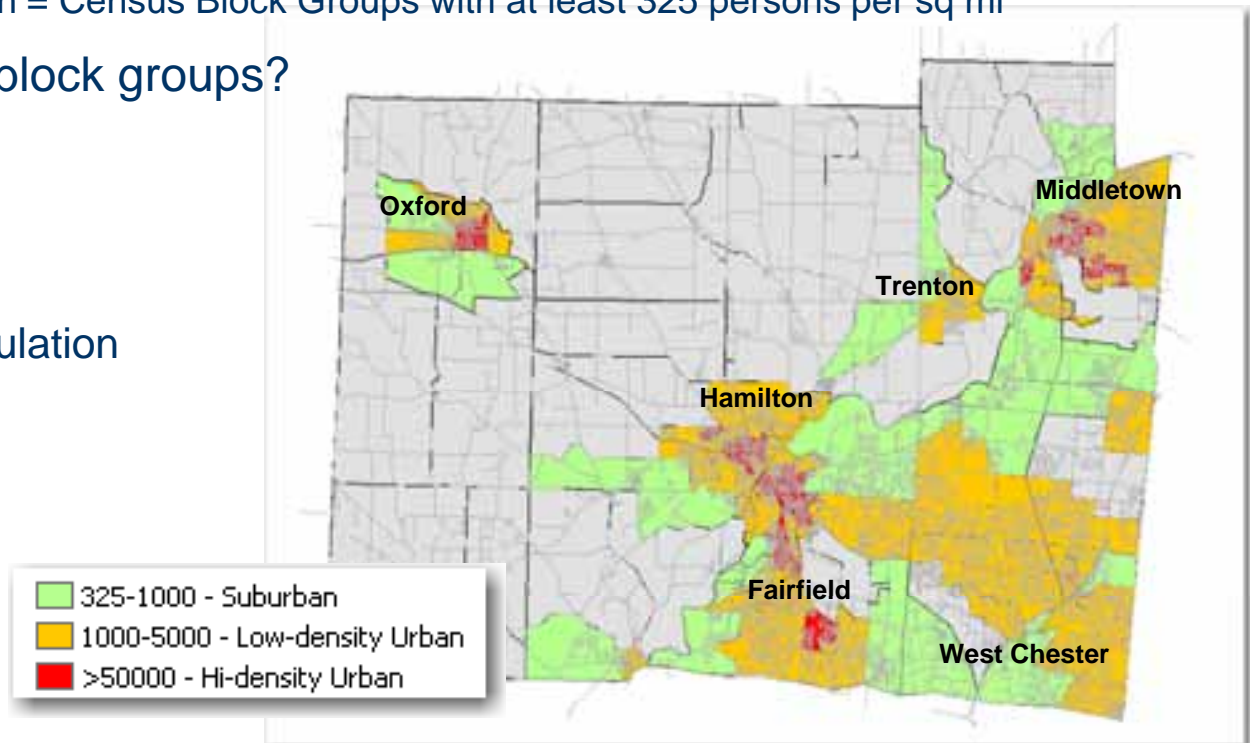
Butler County- A tale of two Counties.....

- Suburbs of the county (primarily Liberty and West Chester Townships) are some of the fastest growing economic regions in the state of Ohio
- Median household income in West Chester Township is \$85,159 (US median is \$41,994)
- County ranks 61/88 in terms of unemployment
- **BUT:**
- Fastest growing rates of poverty are in Suburbs (2010 Brookings Institute Report)
- Student assistance programs (Head Start, etc) seeing 15% annual increase in past 5 years
- **Local Food pantries have seen a 16% increase in the past year**
 - **1/4 of these people have never been to a food pantry before**



Defining the Study Area

- Needed to expand the traditional definition of a food desert to fit the more rural and suburban landscape of the County
- Classified county into **High Density Urban**, **Low Density Urban**, **Suburban**, Exurban, and Rural
 - *OSU Exurban Change Project*
 - Urban and Suburban = Census Block Groups with at least 325 persons per sq mi
- How many census block groups?
 - 193/221
- How many people?
 - 293,009/332,807
 - 88% of 2000 population



Characteristics of Suburban Food Insecurity

- Suburban Food Pantry Users more Food Insecure than urban and rural users (Iowa State University)
- Less likely to participate in food assistance programs
- More likely to have transportation problems

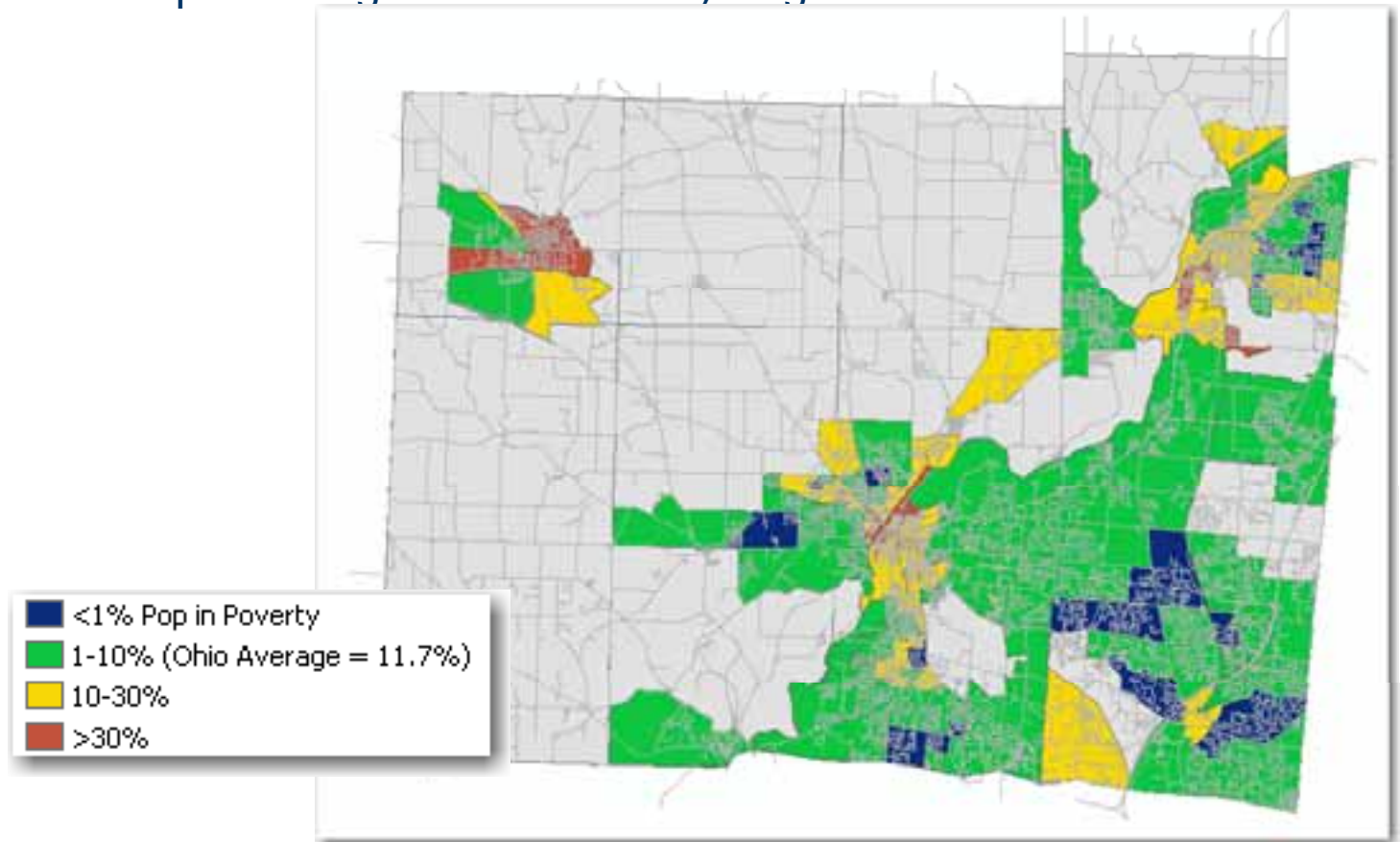
Identifying Areas with Relatively High Poverty Rates & Limited Access to Healthy Foods

- Poverty Data
 - Percent of Population living below the poverty line from 2000 US Census
- Limited Access
 - US Census information on households without vehicle access
 - Live beyond 1 mile of grocery stores and food markets
 - Assumes a person could walk 1 mile and back from grocery store...



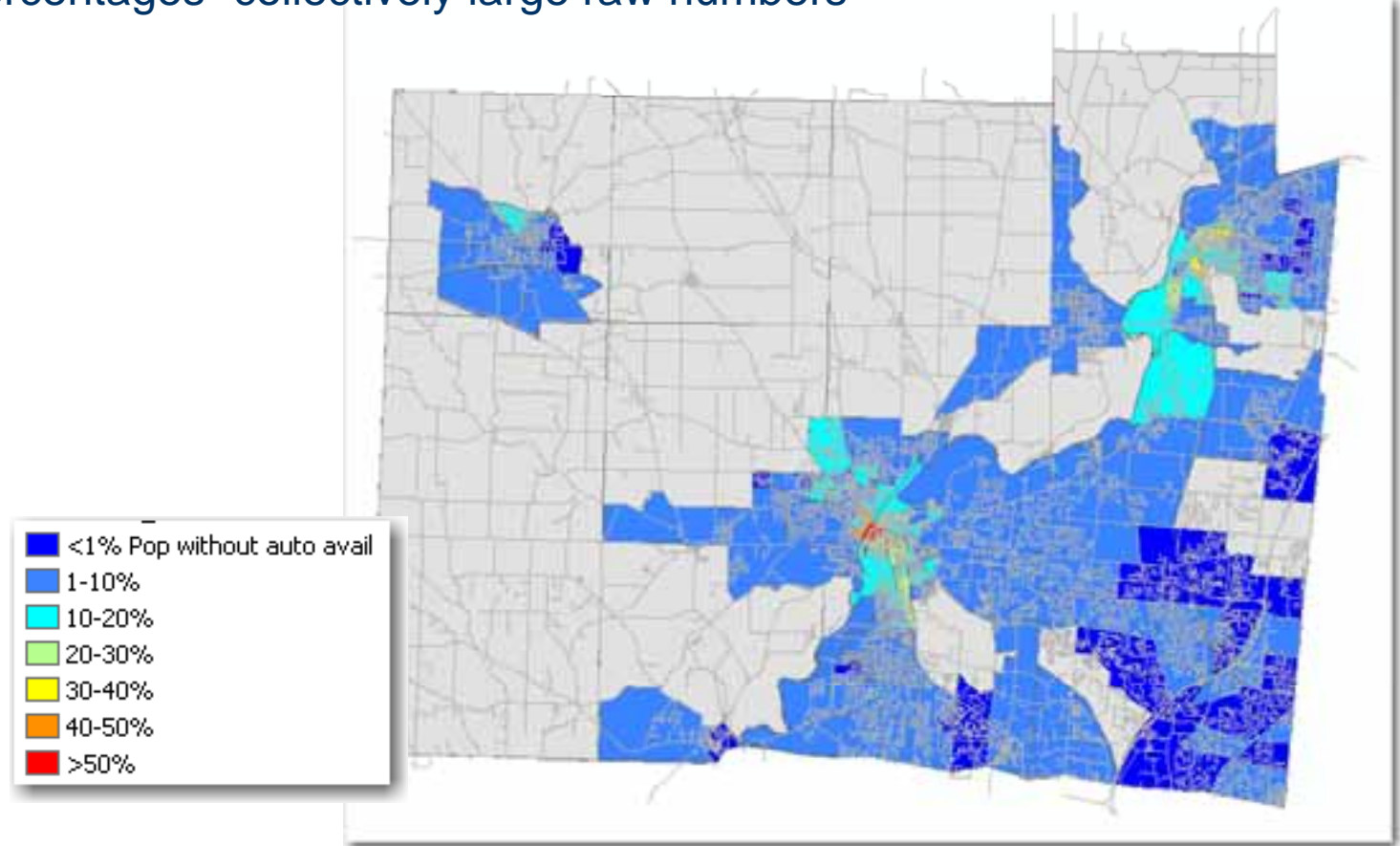
Poverty Data

- Poverty Data
 - Percent of Population living below the poverty line from 2000 US Census
 - Suburban: Small percentage but collectively large raw numbers



Access Data – Automobile Availability

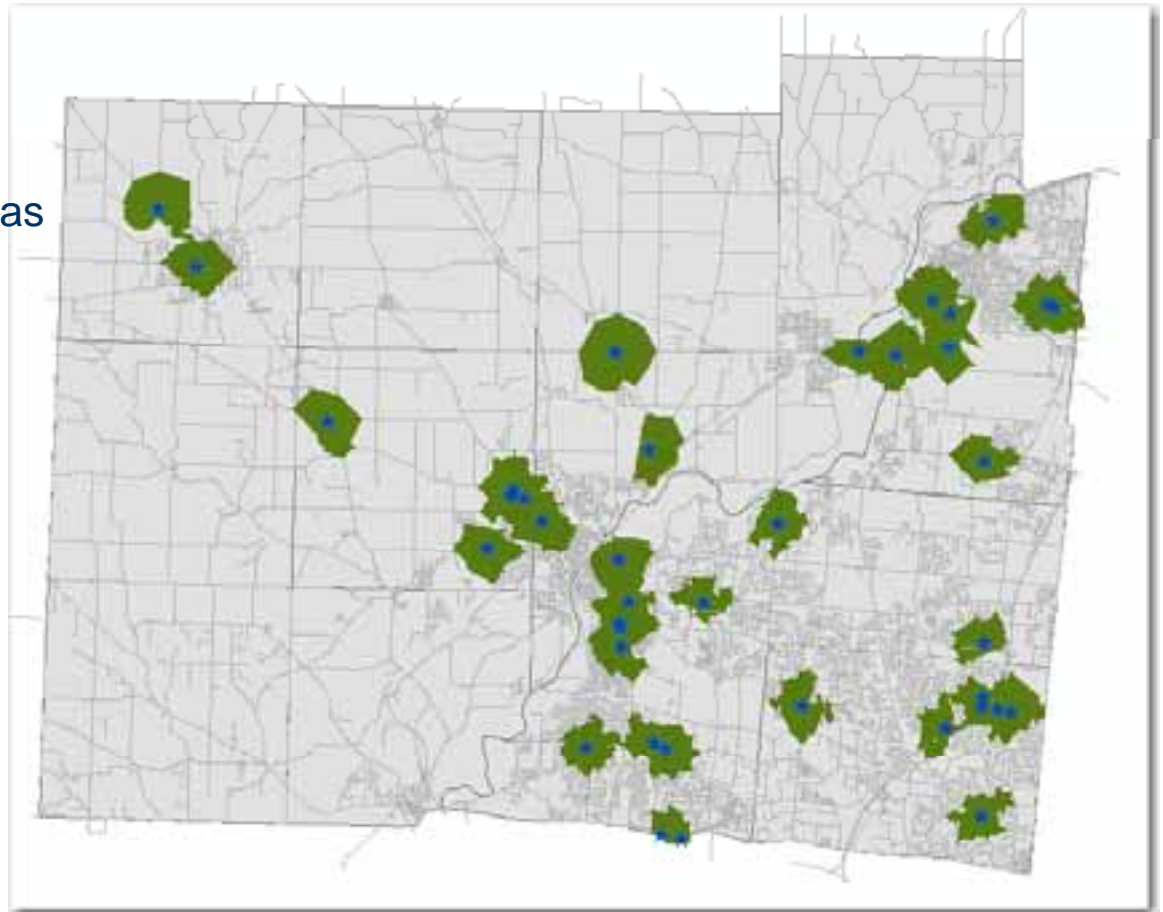
- Automobile Availability
 - Percent of households reporting no access to automobiles in 2000 Census
 - Small percentages- collectively large raw numbers



Access Data – Location of Grocery Stores

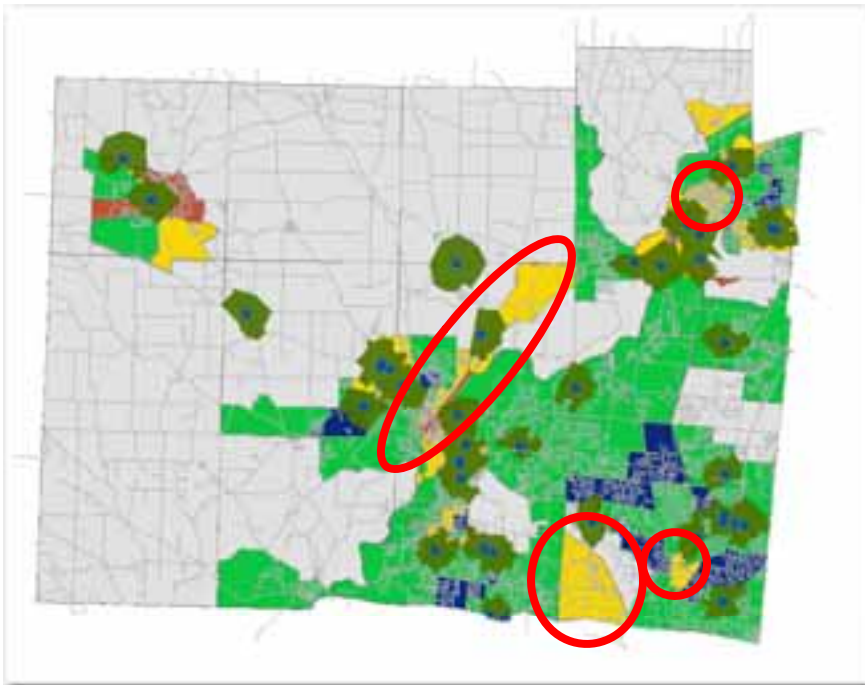
- From LBRS Data

- 39 Chain and Local grocery stores that offer year-long access to fresh fruits and vegetables
- 1 Mile Service Areas
 - Network Analyst
 - Detailed Service Areas

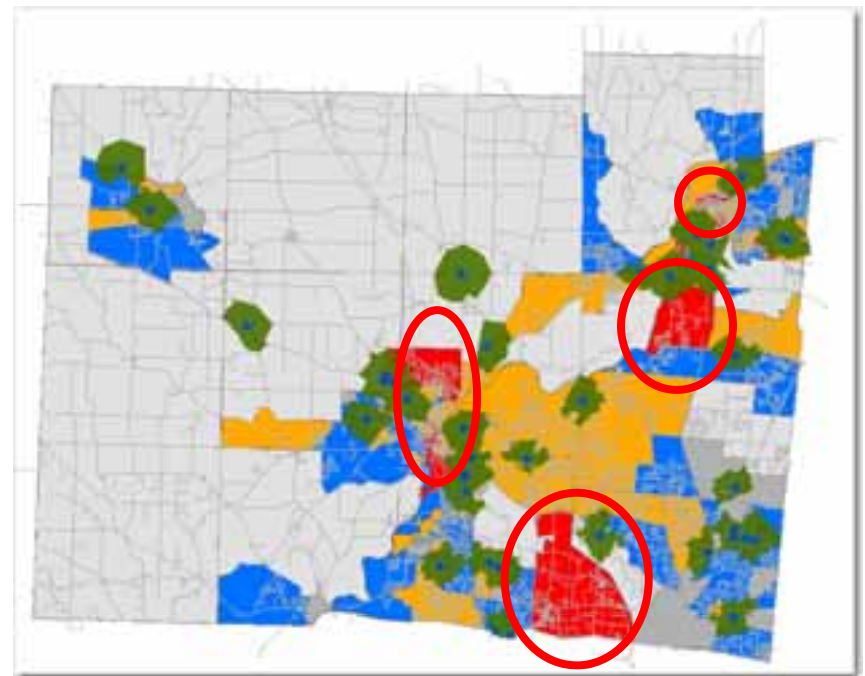


Putting It All Together = Identifying Food Deserts

- Poverty + Distance to Grocery Stores



- Auto Access + Distance to Grocery Stores



What's "Growing" in These Deserts?

- Food Assistance?
- Farmer's Markets?
- Fast Food?



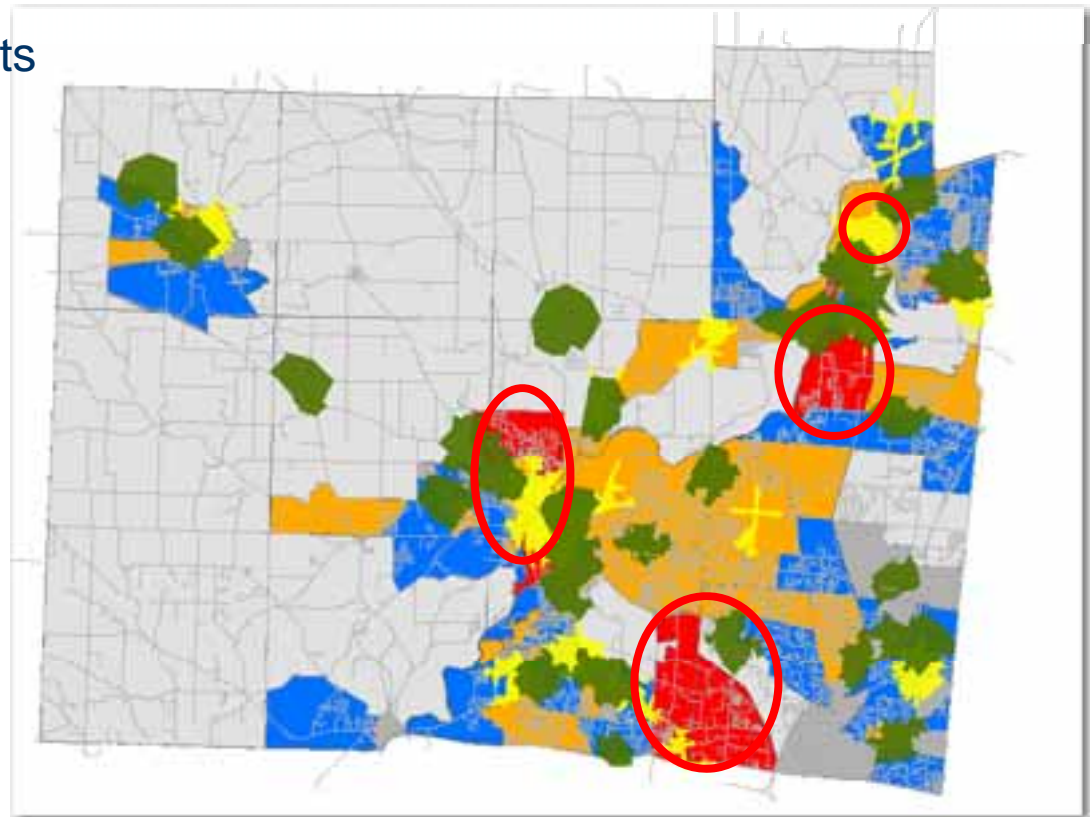
What's "Growing" in These Deserts?

- **Food Assistance – Food Pantries**

- 28 Food Pantries (Data from Shared Harvest)
- Still missing some church pantries and Angel Food Network locations

- Some relief in downtown Hamilton & Middletown

- Still large Suburban Deserts

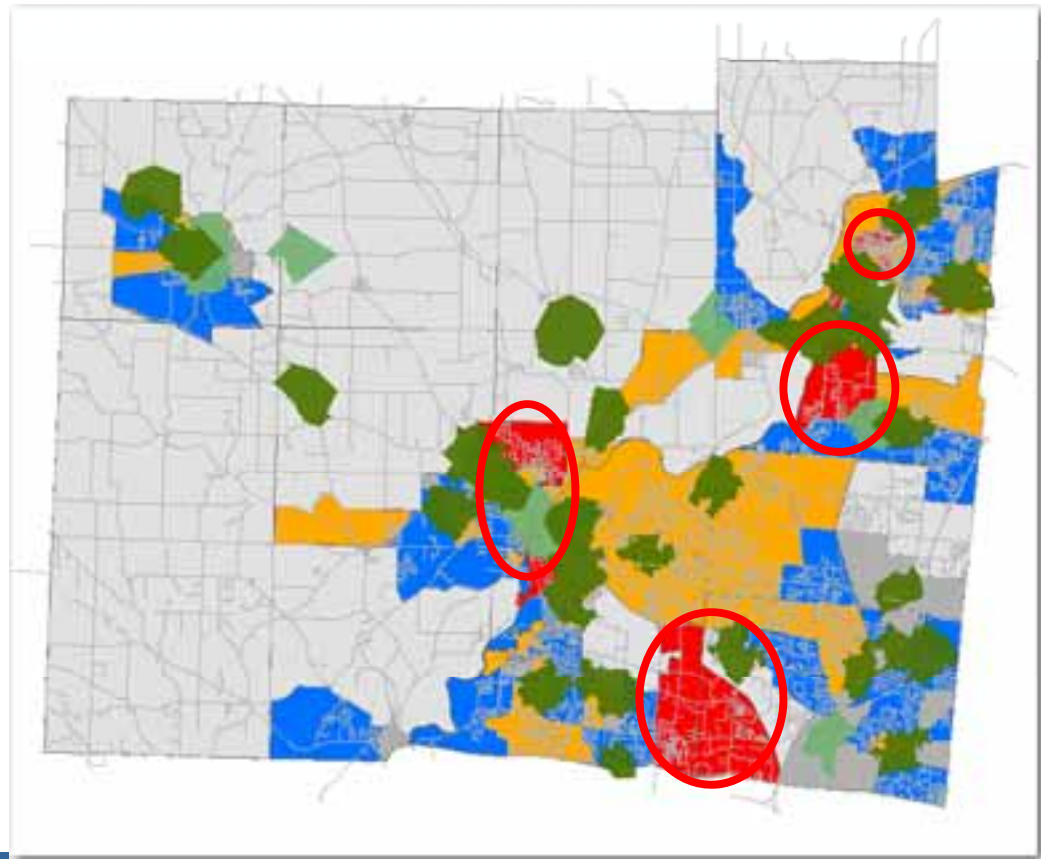


What's "Growing" in These Deserts?

- **Farmer's Markets**

- Nine established markets that are recurring or permanent

- Relief in Downtown Hamilton only

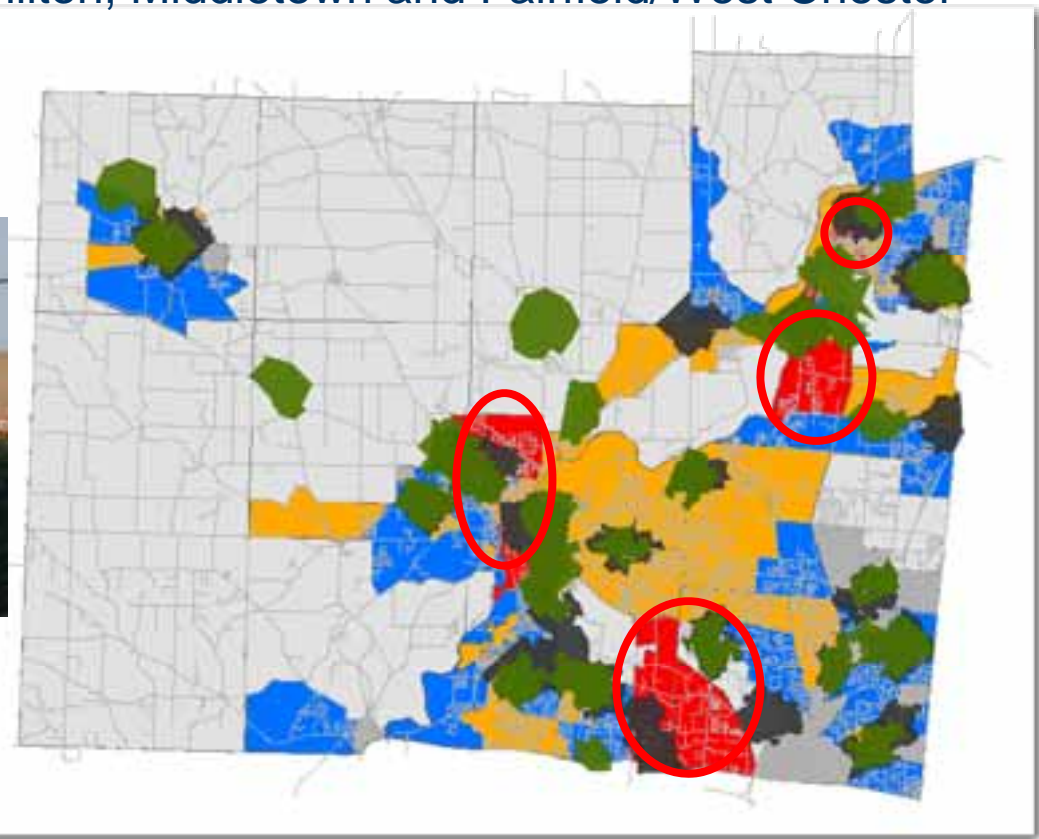


What's "Growing" in These Deserts?

- **Fast Food**

- 85 Chain Fast Food Restaurants (ca 2008)
- Does not include pizza places...

- Begins to fill deserts in Hamilton, Middletown and Fairfield/West Chester



What does it all mean?

- Large numbers of people in Middletown, West Chester, and Fairfield are in food deserts year-round
- Food Pantries & Farmer's Markets do provide some relief
- There is still the issue of ACCESS to these venues
- Fast food is an easier option for some in these areas
 - Health affects & Obesity
- Clearly food insecurity and food deserts are not only an urban problem
 - With current economic crisis, this problem is likely to continue to grow

What will this be used for?

- Community needs assessments related to healthy food access
- Begin a local food foods coalition that would address obesity and healthy food access
- Locating Community Gardens
 - “Salsa Garden” in West Chester donating to the Serve City food pantry in Hamilton
- USDA Grant to target school districts
- Education!



Future Data Analyses

- Food Stamp enrollment data
- Additional US Census statistics
- Look at sidewalk availability
- Public Transit routes in Middletown
- Fast Food and Convenience Store locations
 - Previous US research shows these fill in the “gaps” where grocery stores are inaccessible
- Possible surveys



Sidewalks?!



September is Food Desert Awareness Month



www.fooddesert.net



Thank You & Contact Info

- Robbyn Abbitt

- abbitrj@muohio.edu



- Dan Remley

- remley.4@cfaes.osu.edu

