Food Accessibility: Data and Metrics

Sarin Adhikari, PhD
Center for Urban and Regional Analysis (CURA)
Virginia Commonwealth University
Food Desert Characteristics

**Grocery Store Density**
- Fewer grocery supermarkets and sit-in restaurants
- More convenience stores and fast food restaurants / take-outs
- Corner stores mostly filled with non-perishable processed food
- Limited options of fresh vegetables and meat

**Accessibility**
- Walkshed ½ mile to 1 mile
- Low / no vehicle ownership
- Low / no access to public transit
- Age or health related mobility issues
Food Desert Characteristics

Community SES

• Concentrated poverty, high unemployment

• 30% less grocery supermarkets than high income neighborhoods

• Low income areas have 4 times as many convenience stores than other areas

• Food more expensive, yet mostly unhealthy options available

• Health of the community at risk

Built Environment

• High rate of foreclosures, boarded up units, low property value.

• Sidewalks not available, streetlights none or not working

• High crime rates - difficult to venture even a 1-mile hike to and from a grocery store
Grocery Store Accessibility in Richmond
USDA Food Desert Designation

- Census Tract based
- Low Income Low Access (LILA)
- \(\frac{1}{2} \) - 1 mile in Urban Areas
- 10-20 miles in Rural Areas
Grocery Stores in Richmond – radial buffer

- NAICS 445110
- Grocery Supermarkets
- High density in West side
- Fewer locations in East and South sides
Grocery Stores in Richmond – network based catchment

- Network catchment areas
- VITA street data
- Smaller than fly-by buffers – more realistic accessibility estimates
Population Without a Vehicle

- Higher proportions in East end, South side, and Northside
- Public housing courts show lowest vehicle ownership
Food-Vulnerable Areas in Richmond

- Most vulnerable areas
- Overlay of poverty, transit dependency, and no vehicles owned
Examples of Food Deserts in Richmond

- Highland Park
- Washington Park
- Gilpin
- Whitcomb
- Fairfield
- Mosby
- Creighton
- Highland Spring
- Manchester (part)
- Woodhaven
- Warwick
- Brookbury
- Cottrell Farms
Socio-Economic and Neighborhood Characteristics
Median Household Income is among the lowest in the areas identified as Food Deserts.
Unemployment rates are very high in the areas identified as Food Deserts.
A majority of households in the focus area received SNAP (Supplemental Nutrition Assistance)
• Lowest median rent
• An indicator of blight
• Abundant vacant industrial land and low rent — opportunity in disguise
Homeownership is low in the focus area.

Impact on community participation and ownership of new initiatives.
Among the lowest property values in the region

An indication of blighted conditions
• Among the highest foreclosures and bank sales in the region
• Another indication of blight
• Concentration of public or subsidized housing

• Negative stereotypes attached with public housing keeps businesses away
High crime rates in some of the identified areas.

People’s mobility / walkability further reduced due to insecurity perceived by the residents.

Discourages new businesses
The ‘Reign’ of Convenience Stores

- Grocery Stores
- Convenience Stores
- Grocery Service Area

- NAICS 445120
- Better than nothing
- Few sell fresh vegetables or meat
- Mostly non-perishable processed food
- Expensive
The ‘Reign’ of Convenience Stores

Food Accessibility Data and Metrics
Breakout Discussion Topics [Including, but not limited to]

Ongoing and Past Efforts

- Local/regional initiatives
- Locations and service areas of:
  - Community Gardens
  - Urban Farms
  - Food banks / shuttles, etc.

Lessons learnt / Suggestions

- Success stories
- Pitfalls to avoid
- Why something did not work
- Solutions that are feasible
- Appropriate metrics for measuring input and outcome