

SPATIAL POPULATION AND ASSET REPRESENTATIONS
GUIDE FOR PUBLIC HEALTH PROGRAM PLANNING
(HOW DO YOU FIND WHAT YOU NEED?)

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FY' 17 EBT at Michigan Farmers Markets Project

- Address food insecurity by improving healthy food access to families in need
- Encourage farmers markets (FM) to accept Supplemental Nutrition Assistance Program (SNAP) benefits
 - 300 FM
 - 139 do not accept SNAP benefits
- Identify areas reaching the greatest number of SNAP eligible families by mapping and analyzing data

Method

- Selected geographic level for comparison
- Defined families in need
 - SNAP eligible (income less than 1.85X poverty level)
 - No healthy food retail options such as supermarkets, large grocery stores, or fruit and vegetable stores
- Defined accessible as farmers markets within specified driving/walking distance (buffer)
 - 1/2-mile radius for urban area
 - 5-mile radius for rural area
- Use geoprocessing to create buffers
- Determined which census tracts were accessible to farmers markets (within or intersecting buffer)

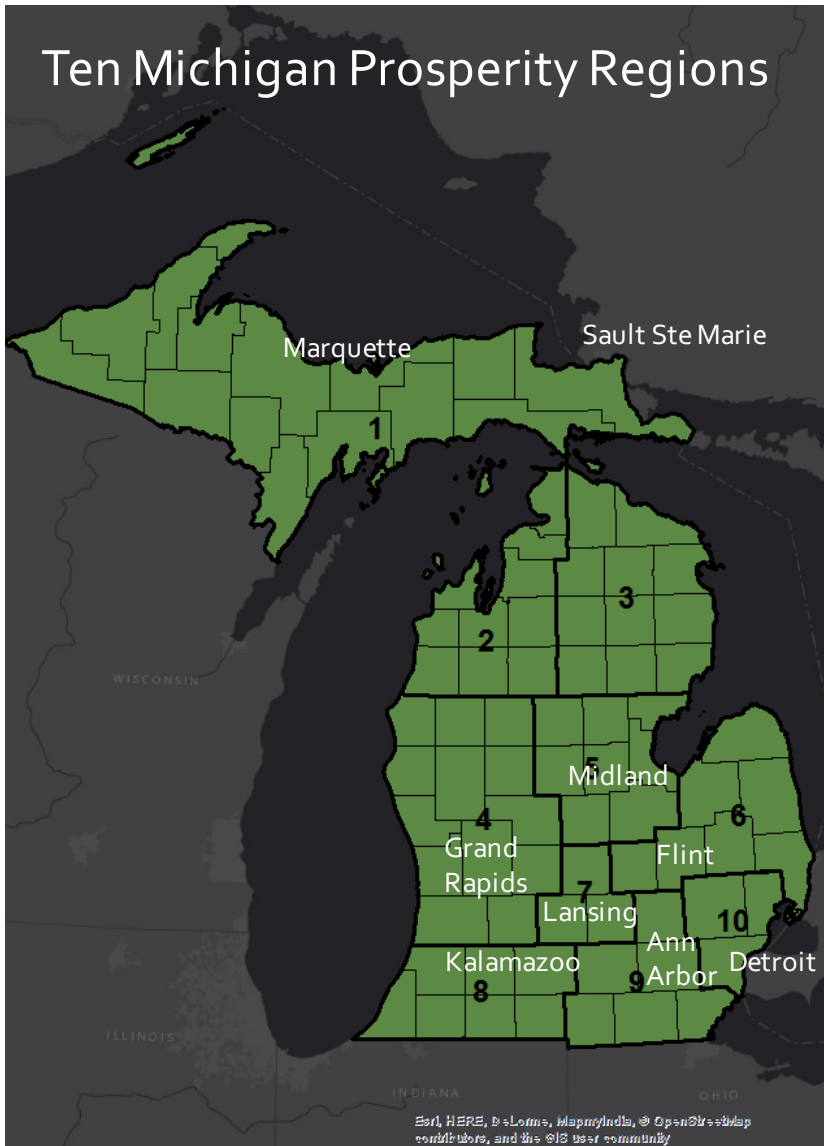
Analysis – Ranked regions based on

- Estimated number of families eligible for SNAP and accessible to FMs
- Estimated proportion of families eligible for SNAP and accessible to FMs

$$\text{Percent} = \frac{\text{Estimated SNAP families}}{\text{Total estimated families}} \times 100\%$$

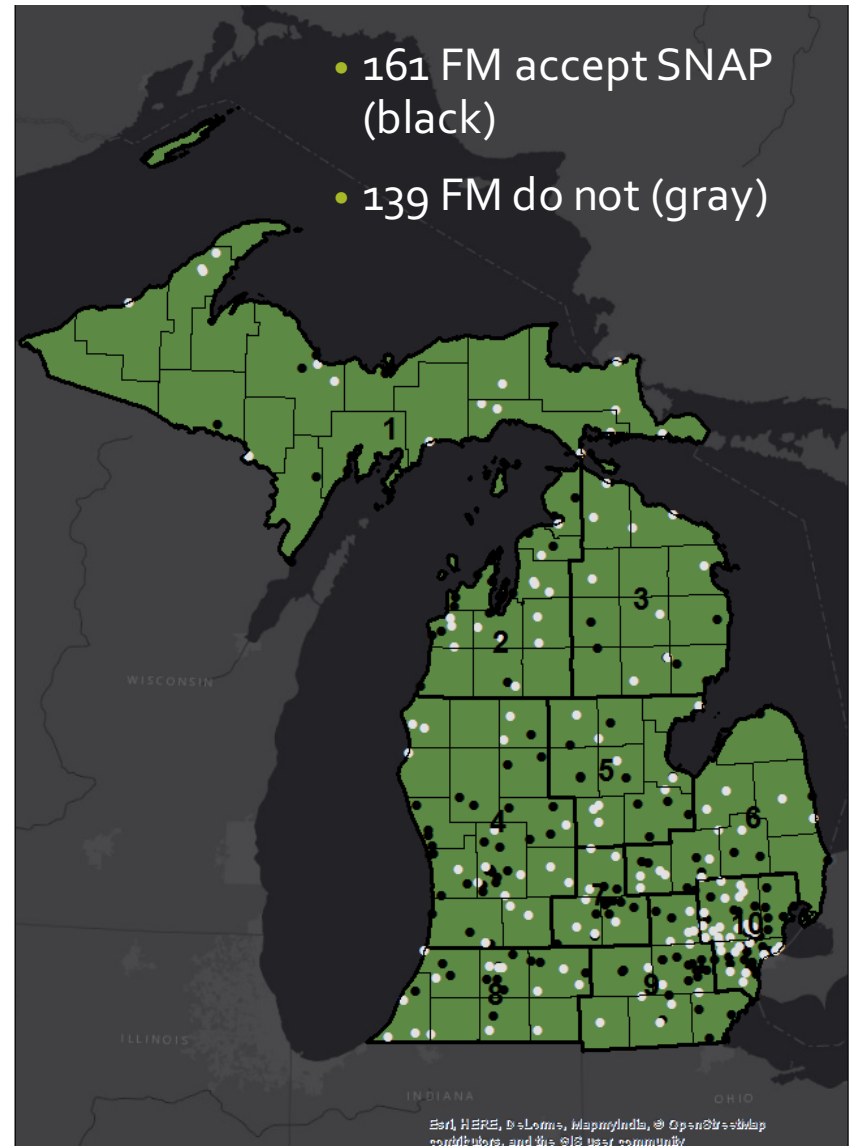
- Both

Ten Michigan Prosperity Regions



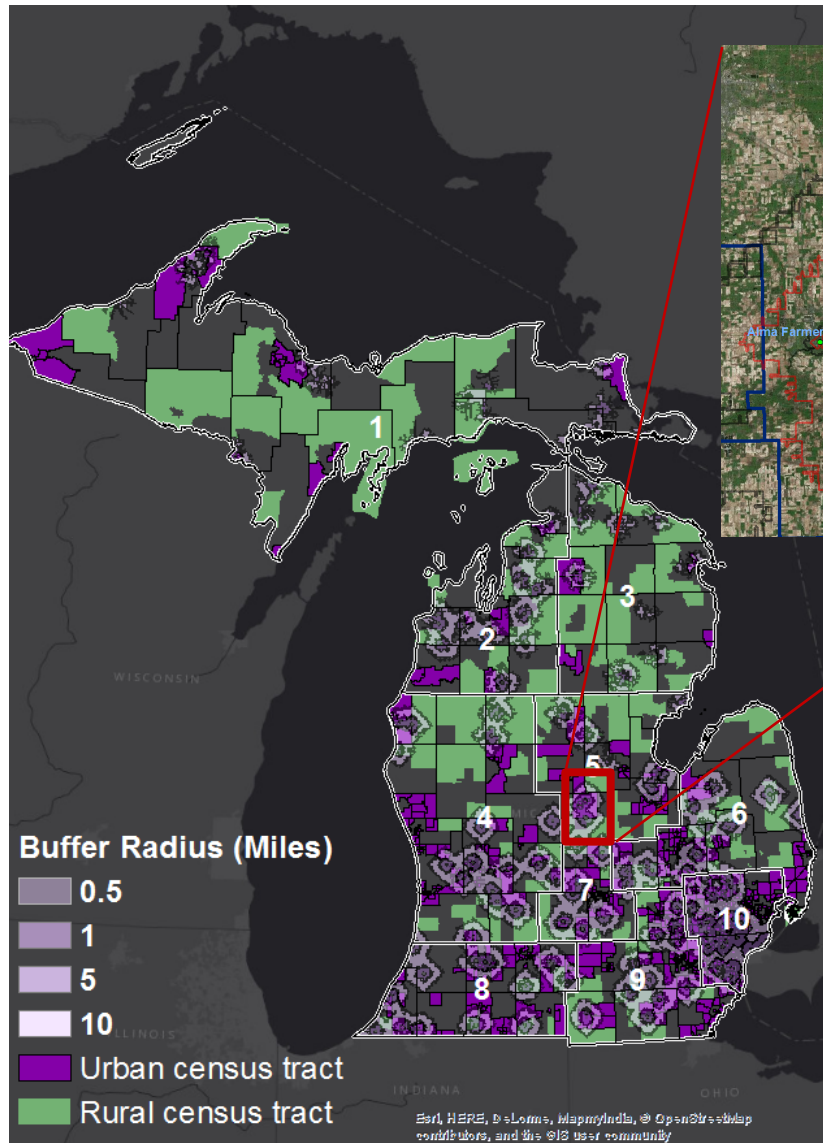
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- 161 FM accept SNAP (black)
- 139 FM do not (gray)



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Families in Need and Accessibility to FM



- Each census tract shown had
 - No healthy food retailers
 - At least one family that was SNAP eligible
- Driving/walking distance was a buffer radius of
 - 0.5 mile for urban census tracts
 - 5 miles for rural census tracts

Sources and Resources:

Nielsen Business-Fact 2015.2

American Community Survey 5 yr. estimate, 2010-2014

ESRI ArcGIS Platform

Analysis – Top 3 in 10

Prosperity Region	Estimated number families accessible to FM in Prosperity Region	Estimated number families SNAP eligible accessible to FM in Prosperity Region	Percent
Region 1	10,404	3,043	29.2%
Region 2	10,673	2,723	25.5%
Region 3	14,982	3,781	25.2%
Region 4	30,824	7,900	25.6%
Region 5	15,550	5,551	35.7%
Region 6	14,559	3,018	20.7%
Region 7	7,274	1,475	20.3%
Region 8	13,488	3,659	27.1%
Region 9	19,162	3,456	18.0%
Region 10	42,353	6,993	16.5%

Findings

- Regions 1, 5, and 8 had the three highest percentages (29.2%, 35.7%, and 27.1%, respectively).
- Regions 4, 5, and 10 had the three highest estimated number of families eligible for SNAP in the Prosperity Region (7,900, 5,551, and 6,993).
- Prosperity Region 5 had the highest percentage and third highest count of families SNAP eligible accessible to farmers markets not accepting SNAP.