



# URBAN FOOD DESERTS: MEASURING ACCESS TO SUPERMARKETS

**Presentation to the 2019 ESRI User Conference,  
San Diego, CA**



**County Planning**

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FOR OUR REGION  
FOR OUR FUTURE



CUYAHOGA COUNTY  
BOARD OF HEALTH  
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# Advisory Board



- Cuyahoga County and City of Cleveland Boards of Health
- Greater Cleveland Food Bank
- Ohio State University Extension
- Health Improvement Partnership-Cuyahoga
- Food Policy Coalition
- Prevention Research Center at Case Western Reserve University



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# Cuyahoga County, Ohio

- 157 Supermarkets
- 459 Square Miles
- Steady/declining population
- High Poverty



## Percent of Children Under Age 18 Below Poverty, 2017

### Large U.S. Cities, Bottom 10

City	Child Poverty Rate
Cleveland, Ohio	48.7%
Detroit, Michigan	48.2%
Cincinnati, Ohio	46.4%
Buffalo, New York	43.6%
Memphis, Tennessee	39.0%
Newark, New Jersey	35.8%
New Orleans, Louisiana	39.3%
Laredo, Texas	36.2%
Baltimore, Maryland	32.6%
Fresno, California	31.7%

*Data Source: U.S. Census Bureau, American Community Survey 2017 1-year estimates*  
Center for Community Solutions, September, 2018.

## Supermarket Access Assessment 2018

- **Identify neighborhoods** with lower incomes and less access to supermarkets (“food deserts”)
- Provide **timely data** to residents, partners and government
- **Establish benchmarks** and ongoing tracking of supermarket closures and implementation plans





# Project Components

## Part 1: Community Food Assessment:

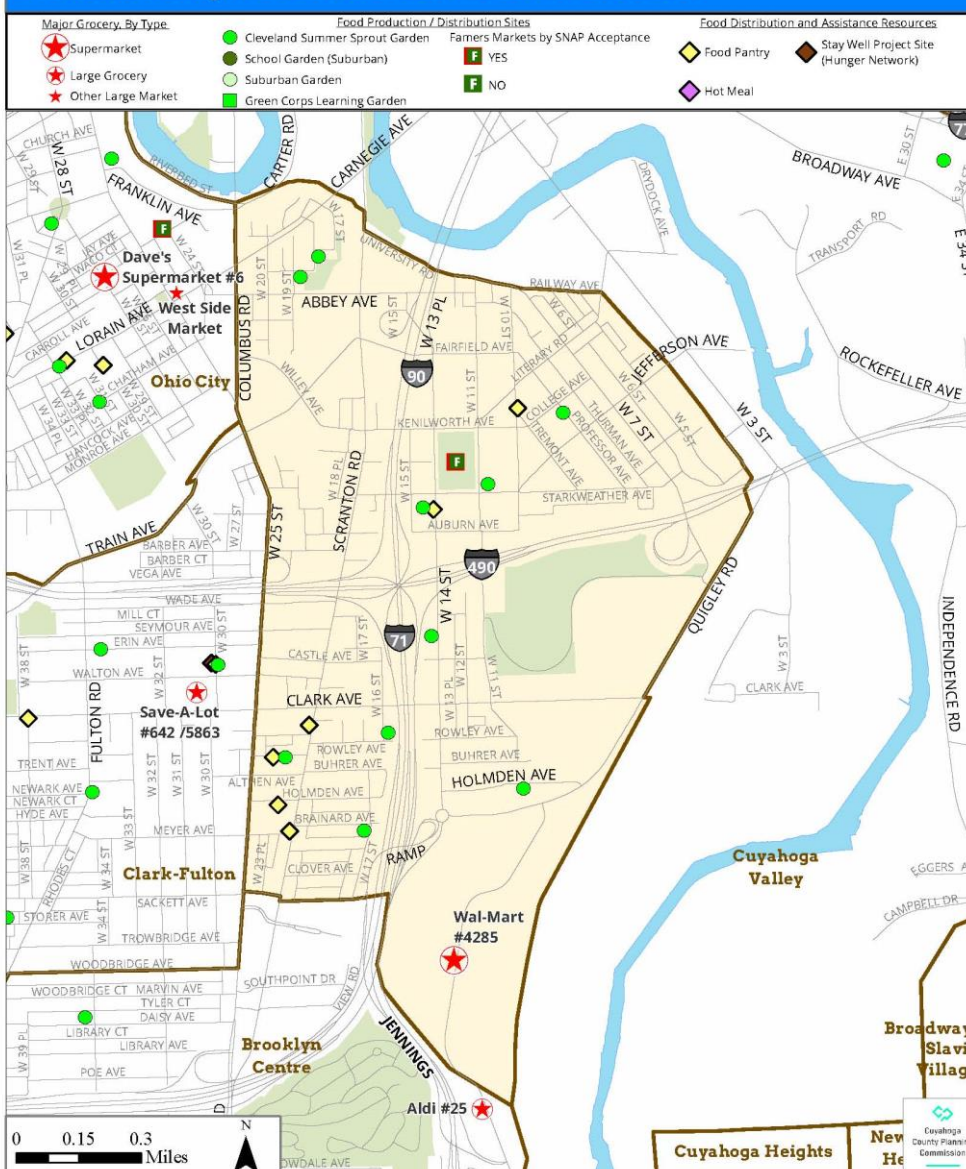
- Inventory of Assets:
- Demographic Analysis by City and Cleveland neighborhood

## Part 2: Supermarket Resource Analysis



# Current Conditions

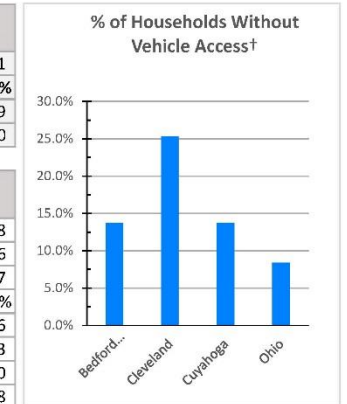
## Community Food Resources: Tremont



2016 CHC Community Food Assessment: Cuyahoga County

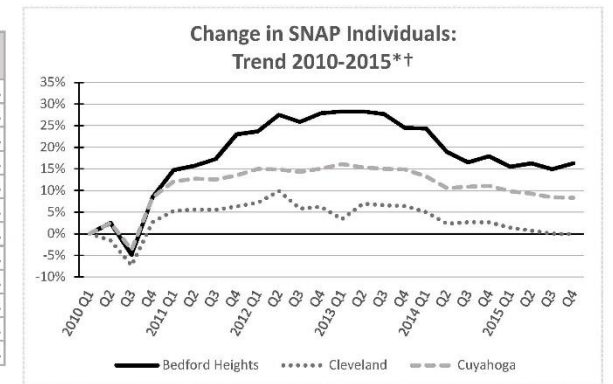
RATIO OF INCOME TO POVERTY LEVEL†	Bedford Heights	Cleveland	Cuyahoga	Ohio
Population for whom poverty status is determined:	10,513	381,531	1,241,330	11,243,508
Population Below Poverty Level	1,477	136,860	230,111	1,790,564
Percent	14.0%	35.9%	18.5%	15.9%
Population Below 200% of Poverty Level	3,760	233,518	461,140	3,859,814
Percent	35.8%	61.2%	37.1%	34.3%

VEHICLE ACCESS†	Bedford Heights	Cleveland	Cuyahoga	Ohio
Households w/o Vehicles	669	42,169	73,370	384,271
Percent	13.7%	25.3%	13.7%	8.4%
Total Vehicles Available	6,744	191,124	793,926	8,105,659
Vehicles Per Person	0.63	0.49	0.63	0.70



SNAP STATISTICS, 2015 4th Quarter††	Bedford Heights	Cleveland	Cuyahoga
Total assistance groups, number	1,397	81,724	140,368
Child-only assistance groups, number	15	931	1,996
Total individuals, number	2,342	152,476	261,717
% Total individuals	22.0%	42.2%	21.2%
Individuals aged <5, number	291	18,874	30,646
Individuals aged 5-17, number	518	40,152	69,533
Individuals aged 18-64, number	1,298	82,545	141,140
Individuals aged 65+, number	235	10,905	20,398

SNAP INDIVIDUALS, TREND 2010-2015††	Bedford Heights	%
2010 Q1	2,014	18.9%
2010 Q4	2,184	20.4%
2011 Q1	2,311	21.6%
2011 Q4	2,477	23.2%
2012 Q1	2,491	23.3%
2012 Q4	2,575	24.1%
2013 Q1	2,584	24.2%
2013 Q4	2,507	23.5%
2014 Q1	2,505	23.5%
2014 Q4	2,375	22.2%
2015 Q1	2,326	21.8%
2015 Q4	2,342	21.9%

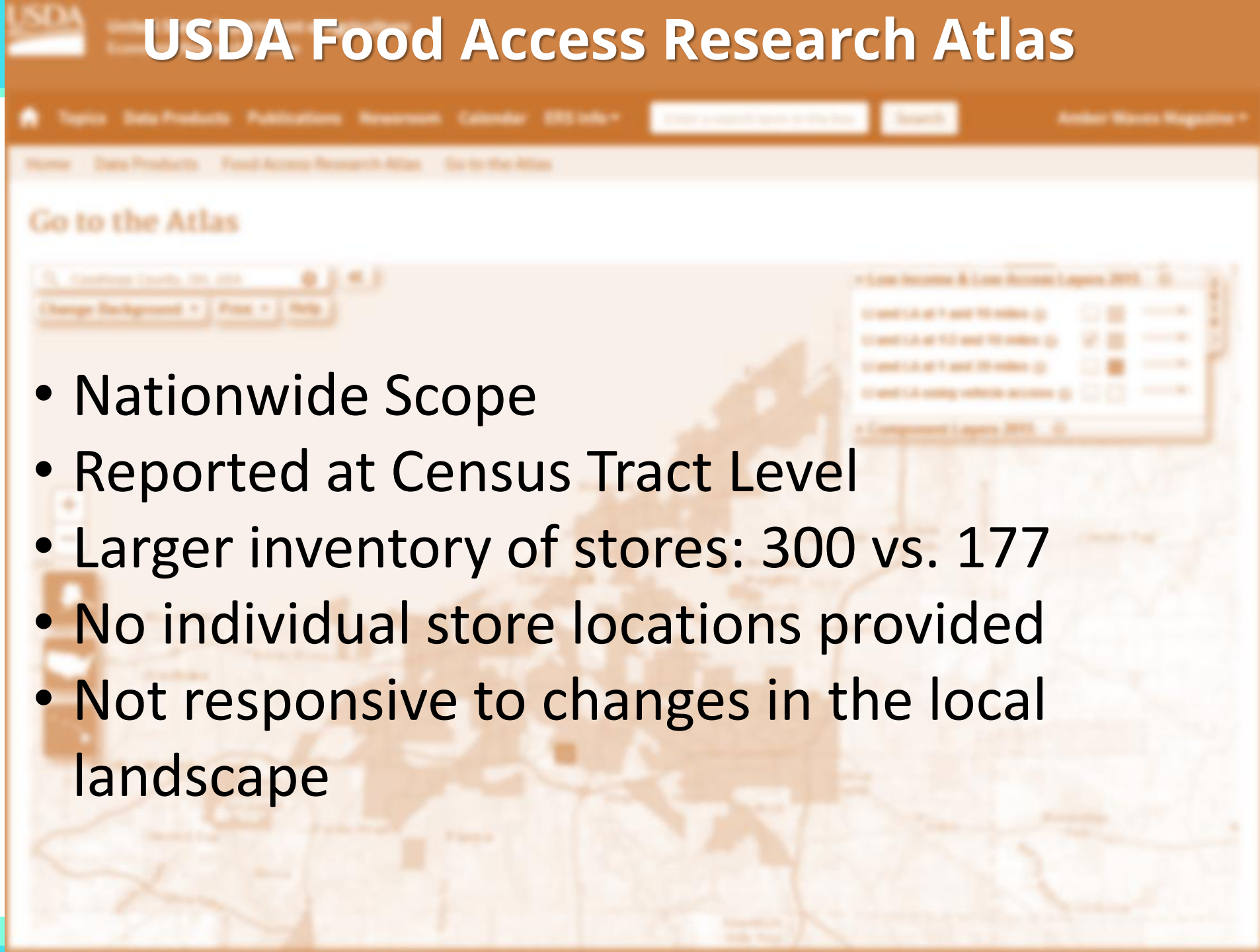


†SNAP Data from NEOCANDO, Center on Urban Poverty and Community Development. All other data from the U.S. Census Bureau, American Community Survey, 2010-2014

†SNAP (Supplemental Nutrition Assistance Program), formerly known as the food stamp program, is a federal program run by the U.S. Department of Agriculture that offers nutrition assistance to eligible low-income individuals and families.



# USDA Food Access Research Atlas



- Nationwide Scope
- Reported at Census Tract Level
- Larger inventory of stores: 300 vs. 177
- No individual store locations provided
- Not responsive to changes in the local landscape





# Supermarket Activity, 2018-2019

## New/Moved Stores:

- **Constantino's Market** (18120 Sloane in Lakewood): New store
- **Lucky's Market** (11620 Clifton in Cleveland (Edgewater)): New store
- **Simons Supermarket** (11501 Buckeye in Cleveland (Buckeye-Shaker)): New store October 2018
- **Mazzulo's Fresh Market** (East Side Market, 10505 St. Clair in Cleveland (Glenville)): New store February 2019
- **Dave's Supermarket** (1929 East 61<sup>st</sup> in Cleveland (Hough): Moved from 3301 Payne February 2019
- **Fresh Thyme** (30016 Detroit in Westlake): New store
- **Whole Foods Market** (50 Wall Street (Pinecrest) in Orange): Moved from Woodmere



## Closed Stores:

- **ALDI** (6711 Broadway in Cleveland (Broadway-Slavic Village))
- **Madison Bi-Rite** (12503 Madison in Lakewood)
- **Dave's Supermarket** (3301 Payne in Cleveland (Goodrich-Kirtland Park))
- **Dave's Supermarket** (2500 East 40<sup>th</sup> Street in Cleveland (Central))





- 
- 2500 E 40th St, Cleveland, OH 44104, USA**
- Walk to Euclid Av & E 40th St Station**  
*Head north on E 40th St toward Community College Ave*  
*Turn right onto Euclid Ave*  
*Destination will be on the left*
- 16 mins (83 Calories) 0.82 miles**
- HealthLine 0.0 lbs CO2**
- Departure Stop:** Euclid Av & E 40th St Station - **12:23**  
**Bus towards Lou Stokes Sta - 2 mins**
- Arrival Stop:** Euclid Av & E 59th St Station - **12:25pm**
- Walk to 6100 Chester Ave, Cleveland, OH 44103, USA**  
*Head east on Euclid Ave toward E 61st St*  
*Turn left onto E 61st St*
- 4 mins (18 Calories) 0.18 miles**
- 6100 Chester Ave, Cleveland, OH 44103, USA**



# Methods

## Analysis Tasks:

- **Develop supermarket inventory**
- **Generate drive-time distances** of 0.5, 1.0, 2.0+ miles
- Identify **Low Income Areas**: where >30% of the population is at less than 200% of poverty level
- **Compile socio-economic data** for census blocks
- Create neighborhood profiles
- Create **interactive mapping application**



- Supermarkets in Cuyahoga County (157)
- Supermarkets Outside Cuyahoga County (18)

- Boards of Health licensing records
- Google (outside County)

[illegible]



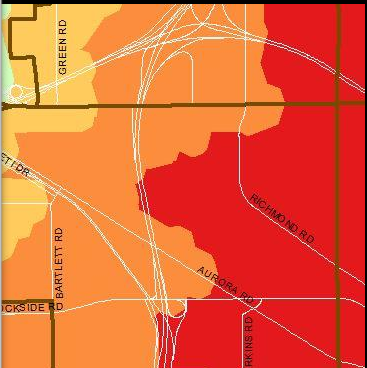


# Generate Driving Distance Areas around each store

- Supermarkets in Cuyahoga County (157)
- Supermarkets Outside Cuyahoga County (18)

## Distance to Nearest Supermarket

- Less than 0.5 Miles
- 0.5 to 1 Mile
- 1 to 2 Miles
- More than 2 Miles



CREDIT USAGE	
ORIGIN POINTS	175
x 3 DISTANCES (0.5, 1.0, 2.0)	3
= SERVICE AREAS GENERATED	525
x CREDITS PER SERVICE AREA	0.5
= CREDITS USED	262.5
COST PER CREDIT	\$0.10
= COST	\$ 26

GenerateServiceAreas [094932\_0210201 /]

Service Areas: <data in local temp location>

Solve Succeeded: true

Output Network Analysis Layer: <empty>

Inputs

Facilities: Major Grocery Stores, By Type

Break Values: 0.5 1.0 2.0

Break Units: Miles

Analysis Region:

Travel Direction: Towards Facility

Time of Day:

Use Hierarchy: false

UTurn at Junctions: Allowed Only at Intersections and Dead End

Polygons for Multiple Facilities: Overlapping

Polygon Overlap Type: Disks

Detailed Polygons: false

Polygon Trim Distance: 200 Meters

Polygon Simplification Tolerance: 10 Meters

Point Barriers: <data in local temp location>

Line Barriers: <data in local temp location>

Polygon Barriers: <data in local temp location>

Restrictions: 'Avoid Unpaved Roads'; 'Avoid Private Roads'; 'Drive on Right'

Attribute Parameter Values: <data in local temp location>

Time Zone for Time of Day: Geographically Local

Travel Mode: Custom

Impedance: Travel Distance

Save Output Network Analysis Layer: false

Overrides:

Environments

Catalog

Location: GenerateServiceAreas

Home - Mapping\WorkingMap

Folder Connections

Toolboxes

Database Servers

Database Connections

GIS Servers

My Hosted Services (Cuyahoga County Planning Commission)

Ready-To-Use Services (Cuyahoga County Planning Commission)

Elevation

Elevation

Geocoding

Hydro

Logistics

World

ClosestFacility

LocationAllocation

OriginDestinationCostMatrix

Route

ServiceAreas

GenerateServiceAreas

Utilities

VehicleRoutingProblem

VehicleRoutingProblemSync

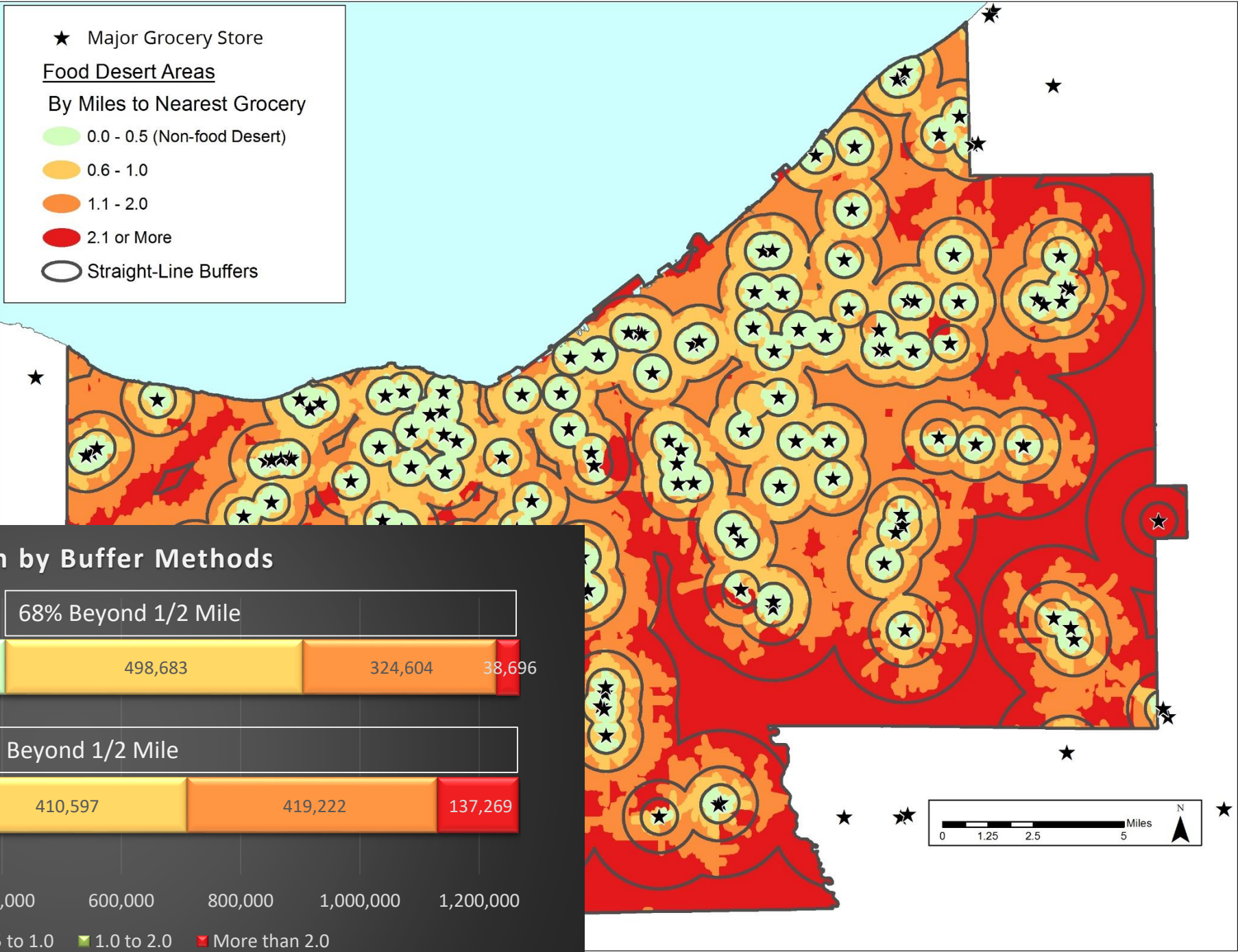
Traffic

Tracking Connections

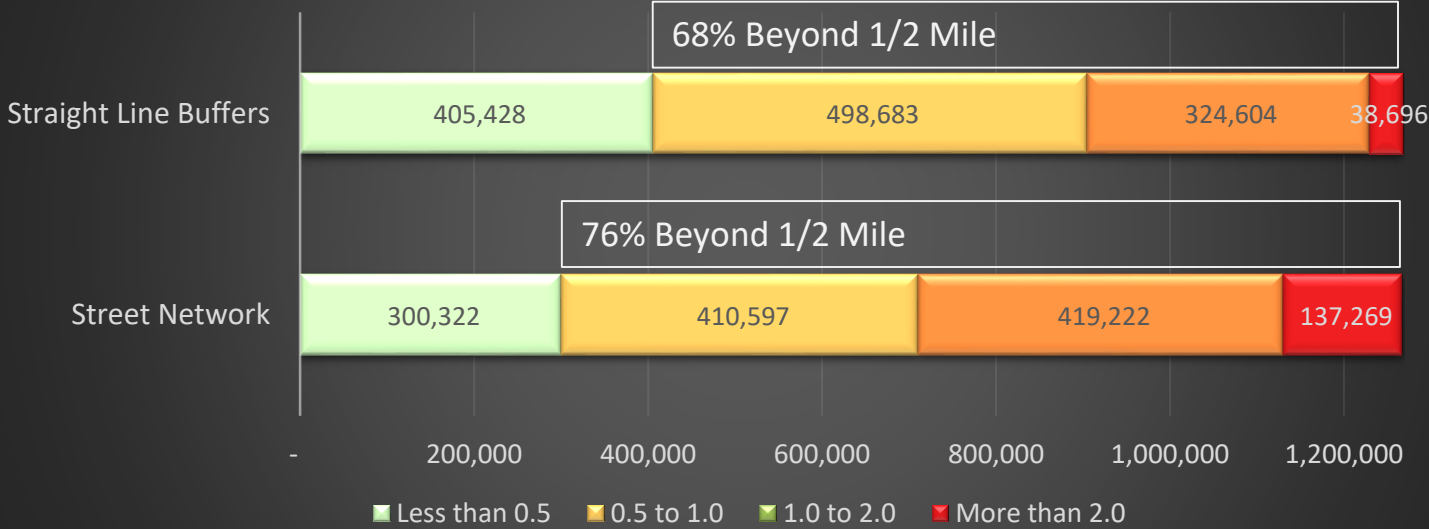




# Comparison to Euclidian Buffers



Population by Buffer Methods



## Further Editing:

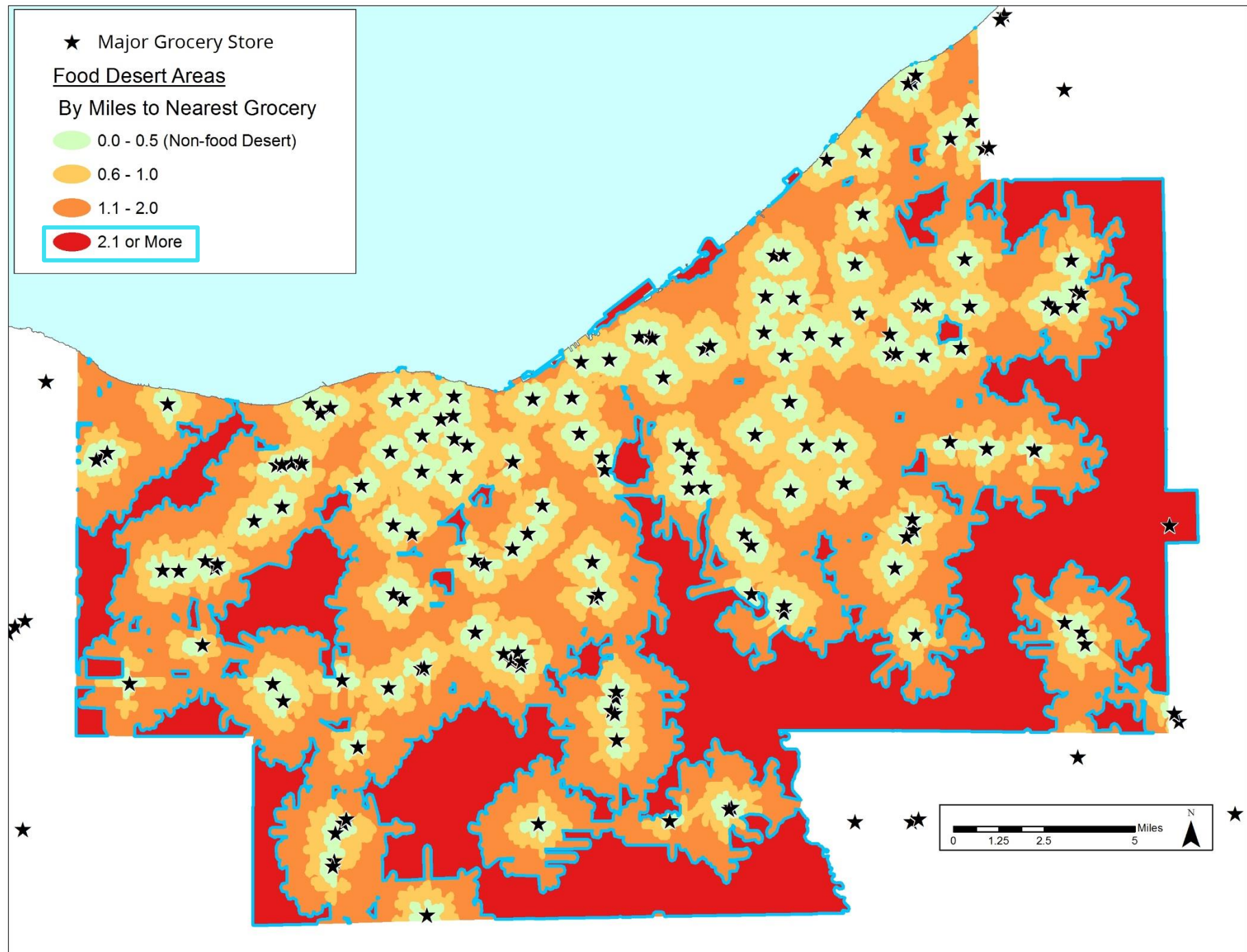
- Dissolve Tool:
  - Dissolve by Distance attribute to merge 540 areas into 3
- Identity Tool:
  - Fill in Balance of County for 2+ miles
- Editor Toolbar - Clip:
  - Convert “Disks” to “Rings”
- Erase Tool:
  - Eliminate areas outside County

- Supermarkets in Cuyahoga County (157)
- Supermarkets Outside Cuyahoga County (18)
- Individual Service Areas (550)





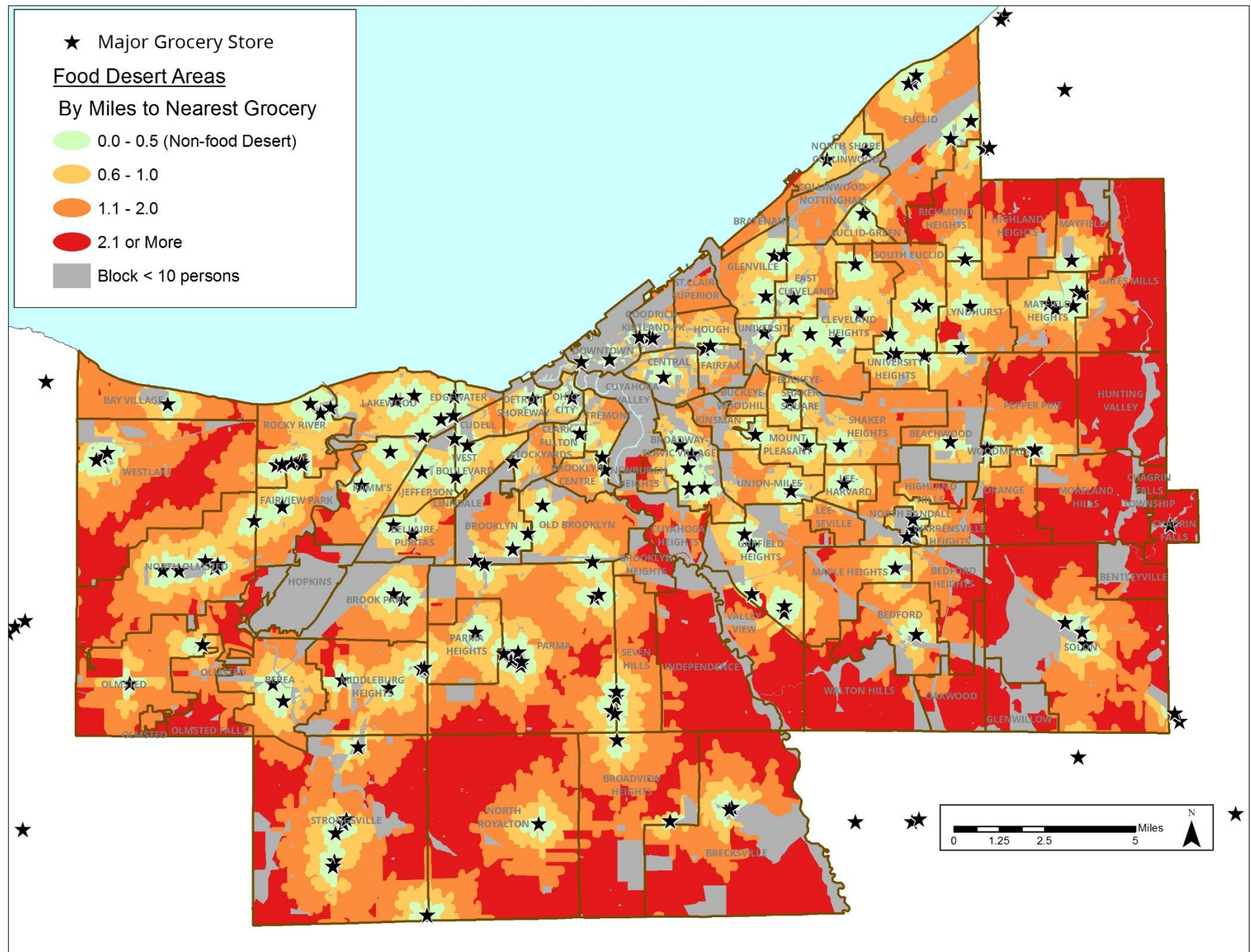
# Edit Service Areas: Results







## Census blocks with population < 10

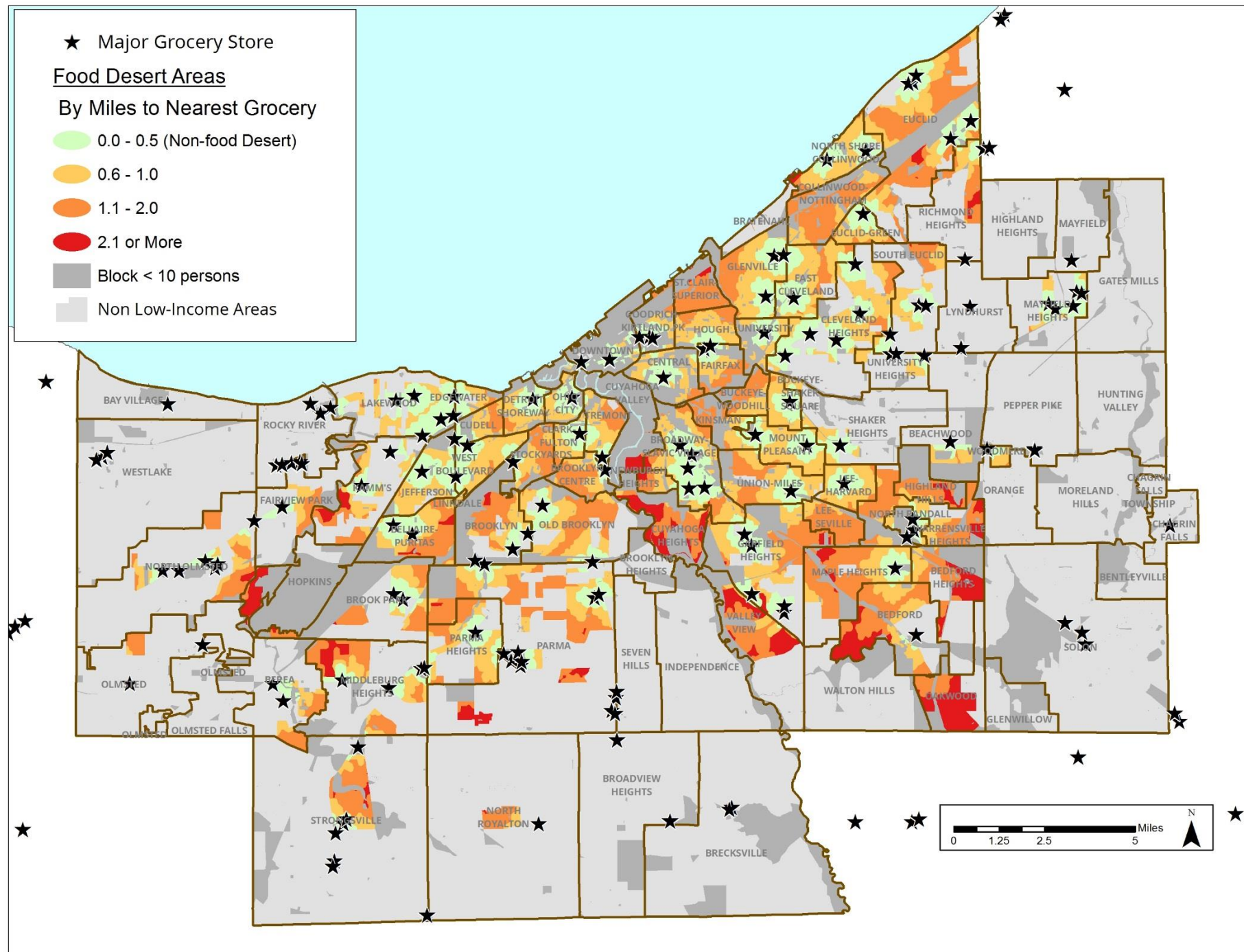




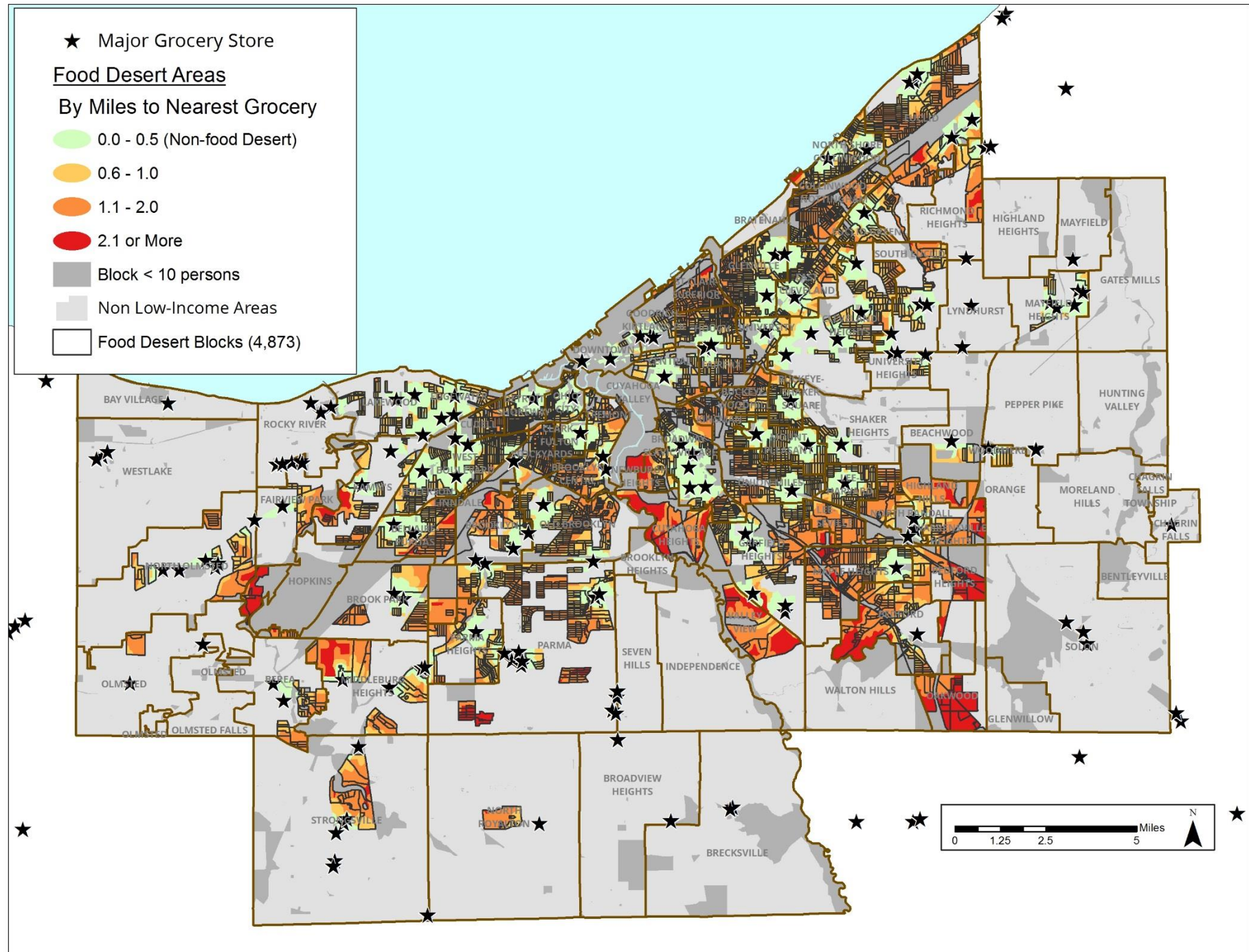
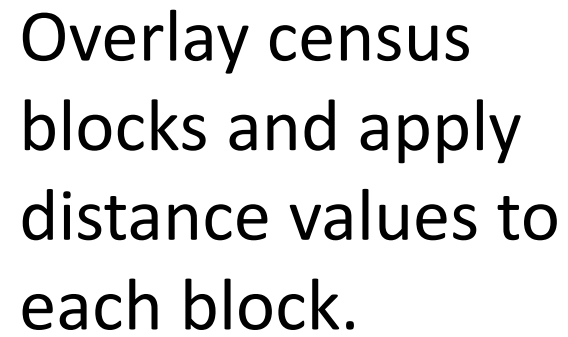
# STEP 3: Apply Low-income Criteria

>30% of Population  
below 200% of  
Poverty Level

*(eliminate areas NOT  
meeting criteria)*









# Demographics by block

Identify	
Identify from: Food Desert Blocks	
Food Desert Blocks	
390351929001026	
Location: 2,212,796.706 631,365.396 Feet	
Field	Value
OBJECTID	1642
Shape	Polygon
GEOID10	390351929001026
AreaSqMi	0.7
Suburb / SPA	Suburb

Identify	
Identify from: Food Desert Blocks	
Food Desert Blocks	
390351929001026	
Location: 2,212,796.706 631,365.396 Feet	
Field	Value
Age 21 yrs	0.829985
Age 22-24 yrs	5.975892
Age 25-29 yrs	7.801859
Age 30-34 yrs	6.307886
Age 35-39 yrs	7.137871

2010 Population	124
2010 Housing Units	50
2010 Population	124
2010 Occupied Housing Units	47
Owner Occupied Households	33.8
Renter Occupied Households	7.6
2010 Block Group Population	747
Block Proportion of Block Group Population 2010	0.165997
2010 Block Group Households	302
Block Proportion of Block Group Households 2010	0.155629



Age 18-24	10.6
Age 25-34	14.1
Age 35-44	14.4
Age 45-54	15.3
Age 55-64	15.6
Age 65-74	12.6
Age 75-84	10.1
Age 85 yrs and over	4.8
Age 5-9 yrs	4.481919
Age 10-14 yrs	5.477901
Age 15-17 yrs	3.485937
Age 18-19 yrs	2.157961
Age 20 yrs	1.65997

Identified 1 feature

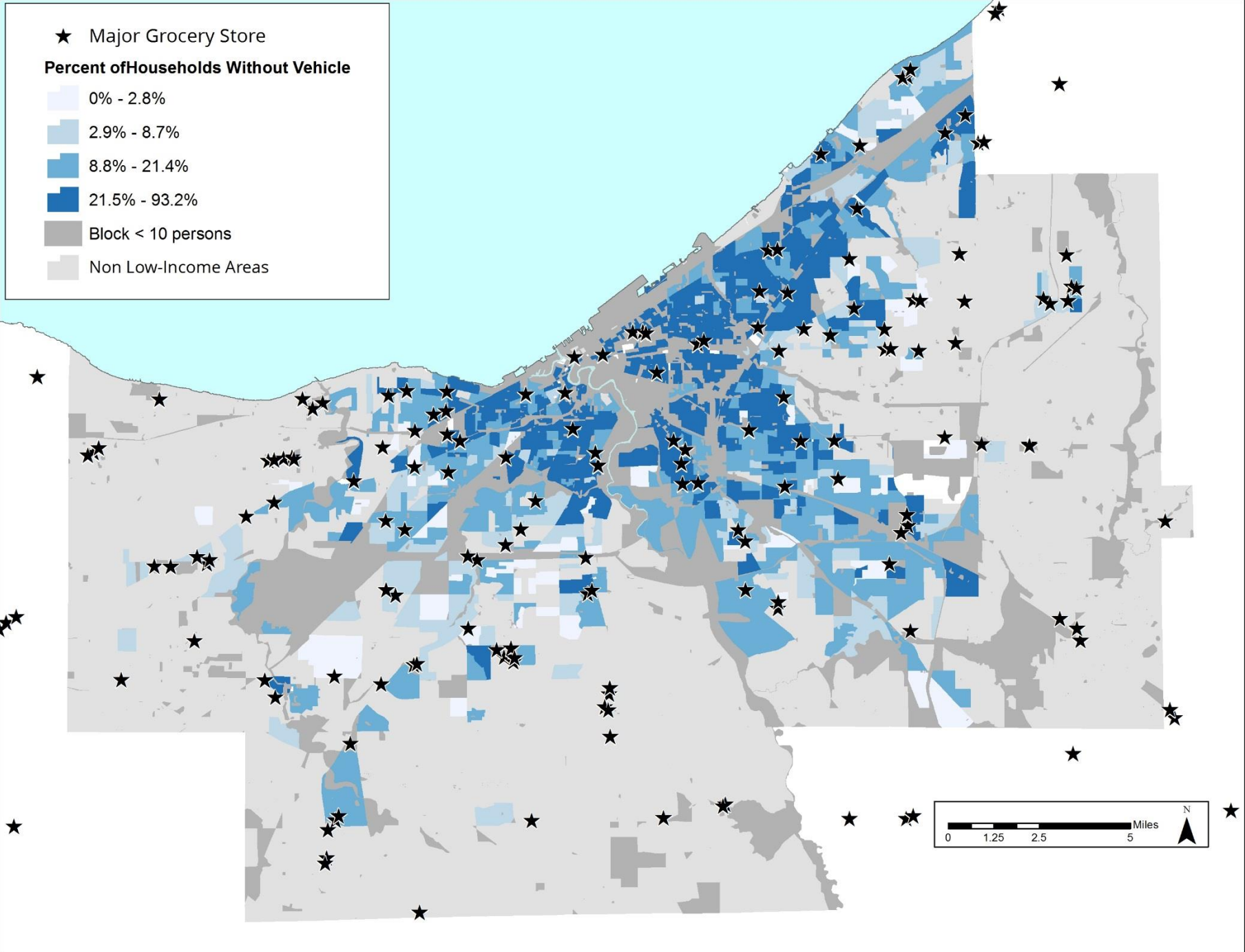
Force	60.1
oyed	6.1
Income	2,756,51
me Less than 10000	1.1
me 10K to 14999	4.4
me 15K to 19999	4
me 20K to 24999	1.2
me 25K to 29999	1.2
me 30K to 34999	1.6
me 35K to 39999	4
Households with Income 40K to 44999	1.1
Households with Income 45K to 49999	0.8
Households with Income 50K to 59999	3.9
Households with Income 60K to 74999	5.3
Households with Income 75K to 99999	3.9
Households with Income 100K to 124999	3
Households with Income 125K to 149999	1.9
Households with Income 150K to 199999	1.9
Households with Income 200K or more	2.2
Total Workers	51.5
EstBLK_Workers	51
EstBLK_Car_truck	50.1
EstBLK_PctComm	0.004315

Identified 1 feature

EstBLK_Commute	0
EstBLK_Commu_1	0
EstBLK_Commu_2	0.8
EstBLK_WorkedA	0.497991
Occupied Housholds - Total	41.4
Owner Occupied Households Without Vehicle	2.801322
EstBLK_RenterOccNoVeh	0.933774
Total Households Without Vehicle	3.7
Aggregate Vehicles Available	80.30456
Vehicles per Person	0.112052
Total Population for Whom Poverty Has Been Determined	119.4
Population Under .50 of Poverty Level	8.8
Population Between .50-.99 of Poverty Level	9.129835
Population between 100-124% of Poverty Level	6.805877
Population Between 125-149% of Poverty Level	6.473883
Population Between 150-184% of Poverty Level	0.995982
Population Between 185-199% of Poverty Level	7.137871
Population at 200% and over of Poverty Level	80.01055
Population Below Poverty Level	17.9
Population Below 200% of Poverty Level	39.3
Shape_Length	0.083127
Shape_Area	0.000204
City Name	Valley Vie
Cleveland Statistical Planning Area	<null>
Drive Mile Zone to Nearest Grocery	2
Meets Poverty Threshold (30% of Pop Below 200% Poverty)	Y
TransitAccess	None
Eblk_TotMinority2	11.1218
Vehicles per Person	0.112053
Food Desert Focus Area	<null>
PctHHwoVehicle	0.090226

Identified 1 feature

# Thematic Maps Within Food Desert Areas







# Aggregate data

## Food Desert Statistics by City & Neighborhood

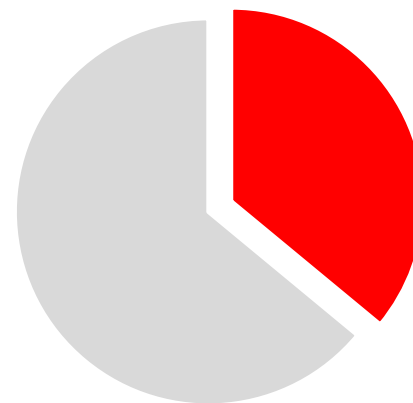
Top Ten values

Area	Count of Blocks	Total Population	Total Households	Pct of Area Population - Total	Pct of Area Households - Total	Minority Population	Percent Minority	Population African American	Percent African American	Population Below Poverty Level	Pct Below Poverty Level	Population Below 200% of Poverty Level	Pct Below 200% of Poverty Level	Total Households Without Vehicle	Pct of Households Without Vehicle	Aggregate Household Income	Average Household Income	Age Under 5 yrs	Pct Age Under 5 yrs	Age Under 18	Pct Under 18	Age 65 and over	Pct Age 65 and Over
Beachwood	4	484	82	4.1%	1.7%	395	81.6%	396	81.8%	-	0.0%	131	27.0%	-	0.0%	5,044,010	81,140	34	7.0%	83	17.2%	238	49.2%
Bedford	109	9,993	4,645	76.7%	79.4%	8,003	80.1%	5,683	56.9%	1,592	15.9%	3,691	36.9%	594	12.8%	217,572,811	46,836	733	7.3%	2,260	22.6%	1,508	15.1%
Bedford Heights	31	5,640	2,826	52.8%	57.9%	4,843	82.3%	4,379	77.6%	994	17.6%	2,807	49.8%	613	21.7%	102,358,424	36,220	301	5.3%	1,239	22.0%	720	12.8%
Berea	33	4,100	1,802	21.8%	21.5%	475	11.6%	355	8.7%	502	12.2%	1,094	26.7%	231	14.4%	62,972,554	58,032	199	4.8%	822	15.2%	713	17.4%
Brook Park	45	6,281	2,829	33.0%	34.2%	1,338	21.3%	419	6.7%	801	12.8%	2,315	36.9%	202	7.7%	135,290,927	51,451	329	5.2%	1,401	22.3%	1,109	17.7%
Brooklyn	62	7,182	3,201	65.1%	69.0%	1,630	22.7%	381	5.3%	1,211	16.9%	3,014	41.9%	254	7.9%	151,555,374	47,350	393	5.5%	1,531	21.3%	1,187	16.5%
Cleve: Bellair-Puritas	98	9,761	3,994	68.2%	68.2%	5,360	54.9%	3,458	35.4%	3,043	31.2%	5,759	59.0%	539	13.5%	152,231,554	38,116	880	9.0%	2,417	24.8%	1,009	10.3%
Cleve: Broadway-Slavic Village	165	8,563	3,333	40.3%	39.7%	5,216	60.7%	4,820	56.1%	3,403	39.6%	5,886	68.5%	829	24.9%	128,258,080	38,484	569	6.6%	2,508	29.2%	675	7.9%
Cleve: Brooklyn Centre	107	9,102	3,284	68.5%	68.3%	5,015	55.1%	2,338	25.7%	3,864	40.2%	6,022	66.2%	895	27.3%	117,554,545	35,706	552	6.1%	2,528	27.8%	738	8.1%
Cleve: Buckeye-Shaker Square	58	5,872	3,029	49.5%	48.2%	5,343	91.0%	4,803	83.5%	2,039	34.7%	3,509	59.8%	951	31.4%	101,849,348	33,630	349	5.9%	1,148	19.6%	985	16.8%
Cleve: Buckeye-Woodhill	89	6,929	2,817	99.3%	99.3%	6,724	97.1%	6,564	94.7%	3,720	53.7%	5,485	79.2%	1,171	41.6%	62,186,798	22,077	720	10.4%	2,270	32.8%	719	10.4%
Cleve: Central	59	4,726	2,019	43.0%	46.4%	4,450	94.2%	4,324	91.5%	3,019	63.9%	3,892	82.4%	1,257	62.3%	38,542,810	19,062	627	13.3%	1,046	34.8%	442	9.4%
Cleve: Clark-Fulton	106	4,193	1,625	56.6%	57.9%	2,936	70.0%	966	23.0%	2,068	49.3%	2,896	69.1%	439	27.0%	48,194,378	29,662	320	7.6%	1,054	25.1%	379	9.0%
Cleve: Collinwood-Nottingham	167	11,313	4,657	99.9%	99.8%	10,001	88.4%	9,800	86.6%	4,577	40.5%	7,926	70.1%	1,188	25.5%	140,003,487	30,191	644	5.7%	2,733	24.2%	1,683	14.9%
Cleve: Cudell	68	8,149	3,338	91.3%	92.1%	5,268	64.6%	3,310	40.6%	3,760	46.1%	5,947	73.0%	1,099	32.0%	100,067,819	29,977	525	6.4%	2,359	28.9%	567	7.3%
Cleve: Cuyahoga Valley	6	491	277	37.0%	82.3%	301	61.4%	285	58.0%	258	52.6%	322	65.6%	95	34.2%	13,813,826	49,780	46	9.4%	122	24.9%	31	6.3%
Cleve: Detroit-Shoreway	108	5,465	2,236	53.3%	48.5%	2,914	53.0%	1,797	32.7%	2,326	42.4%	3,552	65.2%	810	39.2%	70,756,780	31,852	322	5.9%	1,143	20.8%	623	11.3%
Cleve: Downtown	7	708	275	6.9%	5.8%	372	52.6%	238	33.6%	295	41.7%	409	70.6%	123	44.8%	9,119,560	33,175	35	4.9%	54	7.8%	19	2.7%
Cleve: Edgewater	18	2,252	1,327	36.2%	39.4%	725	32.2%	613	27.2%	286	12.7%	969	43.1%	267	20.1%	79,433,016	59,898	106	4.7%	293	13.0%	187	8.3%
Cleve: Euclid-Green	33	3,442	1,606	65.3%	61.9%	3,225	93.7%	3,220	93.5%	602	17.5%	1,584	46.0%	355	22.1%	55,283,956	40,662	167	4.9%	756	22.0%	522	15.2%
Cleve: Fairfax	68	4,681	1,982	75.7%	73.4%	4,533	96.8%	4,491	95.9%	1,786	38.1%	2,976	63.6%	717	39.5%	54,898,908	27,071	414	8.9%	1,256	26.8%	823	17.6%
Cleve: Glenville	197	16,518	6,322	62.0%	60.6%	16,137	97.7%	15,853	96.0%	6,946	42.0%	11,621	70.4%	1,885	29.9%	193,099,713	30,544	1,129	6.8%	4,628	28.0%	2,422	14.7%
Cleve: Goodrich-Kirtland	27	2,619	1,169	61.9%	57.6%	1,462	55.8%	825	31.5%	863	32.9%	1,392	53.1%	371	31.8%	66,221,608	56,633	165	6.3%	409	15.6%	315	12.0%
Cleve: Hopkins	1	2	2	1.2%	3.3%	0	0.0%	1	46.4%	1	70.2%	2	83.8%	1	25.7%	56,558	27,085	0	19.5%	1	38.0%	0	6.2%
Cleve: Hough	147	10,119	4,134	86.1%	86.3%	9,750	96.4%	9,500	93.9%	4,813	47.6%	6,737	66.6%	1,958	47.4%	112,822,432	27,244	807	8.0%	2,517	24.9%	1,547	15.3%
Cleve: Jefferson	72	6,568	2,846	40.9%	41.9%	2,860	43.3%	1,655	25.1%	1,331	20.2%	3,153	47.8%	383	13.5%	133,086,869	46,781	504	7.6%	1,482	22.5%	769	12.1%
Cleve: Kamm's	65	9,004	3,840	34.6%	33.0%	3,001	33.3%	1,714	19.0%	2,800	31.1%	4,772	53.0%	634	16.5%	180,396,762	46,979	635	7.1%	1,950	21.7%	1,182	13.1%
Cleve: Kinsman	77	5,135	2,154	75.9%	76.7%	4,992	97.2%	4,921	95.8%	2,813	54.8%	3,874	75.2%	987	44.9%	47,899,166	22,230	798	15.5%	1,080	32.7%	583	11.4%
Cleve: Lee-Harvard	64	6,624	2,712	64.1%	62.8%	6,480	97.5%	6,416	96.9%	1,727	26.1%	3,520	53.1%	311	11.5%	109,008,151	40,189	339	5.1%	1,343	20.3%	1,650	24.9%
Cleve: Lee-Seville	51	5,588	1,997	69.0%	69.0%	4,552	99.2%	4,529	98.7%	1,462	31.9%	2,799	61.0%	401	20.1%	69,551,182	34,628	199	4.1%	1,033	22.5%	890	16.2%
Cleve: Mount Pleasant	9	8,713	3,874	56.1%	55.0%	8,651	99.3%	8,600	98.8%	2,950	32.7%	5,648	64.2%	1,017	11.8%	118,810,744	2,076	445	5.1%	2,075	23.8%	878	10.2%
Cleve: North Shore Collinwood	118	9,241	4,277	57.6%	56.2%	8,937	75.1%	8,694	72.4%	3,008	32.5%	5,314	57.5%	904	21.1%	175,887,711	41,120	652	7.1%	2,182	23.6%	978	10.6%
Cleve: Ohio City	77	4,981	2,326	57.1%	55.0%	2,656	53.2%	2,096	41.4%	2,188	43.8%	3,190	63.9%	863	29.8%	110,232,650	47,368	406	8.1%	1,197	24.0%	351	7.0%
Cleve: Old Brooklyn	188	21,429	9,194	83.1%	61.7%	8,033	28.2%	2,370	11.1%	5,345	24.9%	10,548	49.2%	1,321	14.4%	395,941,874	43,057	1,512	7.1%	5,104	23.8%	2,574	12.0%
Cleve: St. Clair-Superior	100	6,115	2,592	100.0%	100.0%	5,340	87.3%	4,960	81.6%	2,976	48.7%	4,687	76.7%	811	31.3%	99,830,631	26,941	432	7.1%	1,569	25.7%	594	9.7%
Cleve: Stockyards	150	9,039	3,335	97.9%	97.9%	4,904	54.3%	2,315	25.6%	3,973	44.0%	7,115	78.7%	888	26.6%	94,660,483	28,385	800	8.9%	2,352	26.0%	913	10.1%
Cleve: Tremont	92	5,468	2,559	69.5%	67.4%	2,189	40.0%	1,222	22.4%	2,009	36.7%	3,257	59.6%	562	22.0%	128,936,886	50,394	302	5.5%	1,152	21.1%	338	6.2%
Cleve: Union-Miles	191	14,658	5,452	75.4%	73.9%	14,144	96.5%	14,046	95.9%	5,440	37.1%	10,428	71.1%	1,146	21.0%	160,001,985	29,349	1,023	7.0%	4,033	27.5%	2,383	16.3%
Cleve: University	34	3,294	1,662	43.1%	53.7%	1,816	55.1%	1,314	39.9%	1,172	35.6%	1,635	49.6%	720	43.3%	57,586,279	34,657	105	3.2%	310	9.4%	667	20.3%
Cleve: West Boulevard	121	10,845	3,909	57.4%	55.7%	6,780	62.3%	3,400	31.4%	3,505	32.3%	7,283	67.2%	636	16.3%	151,171,323	38,668	880	8.1%	3,048	28.1%	876	8.1%
Cleveland Heights	127	13,085	5,316	28.7%	27.2%	7,311	55.9%	6,588	50.3%	2,848	21.8%	5,465	41.8%	759	14.3%	327,299,438	61,568	1,031	7.9%	3,329	25.4%	1,725	13.2%
Cuyahoga Heights	9	577	229	100.0%	100.0%	45	7.8%	20	3.5%	78	13.5%	176	30.5%	22	9.6%	14,126,702	81,899	27	4.7%	152	26.3%	65	10.5%
East Cleveland	109	10,044	4,869	57.0%	61.0%	9,274	92.3%	8,521	88.8%	4,299	41.9%	7,121	70.9%	1,959	40.2%	133,537,539	27,425	744	7.4%	2,130	21.2%	2,072	20.6%
Euclid	240	27,780	12,419	57.5%	56.0%	17,098	61.5%	16,807	59.8%	5,793	20.9%	12,299	44.3%	1,573	12.7%	556,262,494	44,791	1,302	4.7%	6,521	23.5%	3,762	13.5%
Fairview Park	17	1,988	999	12.0%	13.3%	174	8.8%	57	2.8%	436	21.9%	710	35.7%	88	8.8%	59,534,931	59,020	141	7.1%	390	19.6%	393	19.8%
Garfield Heights	116	13,018	4,893	45.7%	42.8%	7,235	55.6%	6,844	52.6%	2,694	20.5%	6,046	46.4%	632	12.9%	229,018,538	46,809	798	6.1%	3,578	27.5%	2,298	17.7%
Highland Hills	10	951	235	100.0%	100.0%	747	78.5%	714	75.1%	196	20.6%	334	35.2%	56	23.8%	8,721,298	37,112	22	2.3%	148	15.5%	209	21.9%
Lakewood	75	11,722	6,062	22.8%	24.7%	1,850	15.8%	1,183	10.1%	1,512	12.9%	4,319	36.8%	830	13.7%	324,238,366	53,485	658	5.6%	1,925	16.4%	1,462	12.5%
Linndale	9	156	62	97.6%	96.7%	104	66.9%	82	52.9%	22	14.4%	107	68.8%	12	19.2%	2,696,447	43,114	16	10.3%	40	25.5%	28	18.0%
Maple Heights	173	15,133	6,410	66.6%	66.1%	11,581	76.5%	11,337	74.9%	3,138	20.7%	7,149	47.2%	732	11.4%	281,260,365	43,879	694	4.6%	3,545	23.4%	2,023	13.4%
Mayfield Heights	10	997	446	5.3%	4.8%	207	20.8%	83	8.3%	144	14.4%	403	40.4%	33	7.3%	23,060,935	51,662	58	5.8%	190	19.1%	212	21.2%
Middleburg Heights	17	4,784	2,041	30.2%	30.2%	1,908	39.9%	226	4.7%	522	10.9%	1,498	31.3%	183	8.0%	125,060,289	81,276	381	8.0%	969	20.3%	924	19.3%
Newburgh Heights	22	1,804	796	90.2%	90.1%	447	24.8%	345	19.1%	504	27.9%	881	48.8%	65	8.2%	34,636,159	43,531	104	5.7%				

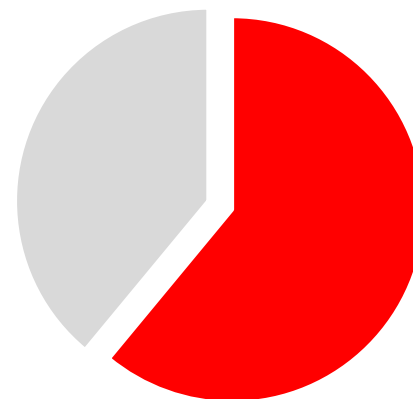


## Food Desert Population

Countywide, nearly 443,000 people live in food deserts – about 35% of all residents.



In the City of Cleveland, over 230,000 people live in food deserts – about 59% of its residents.

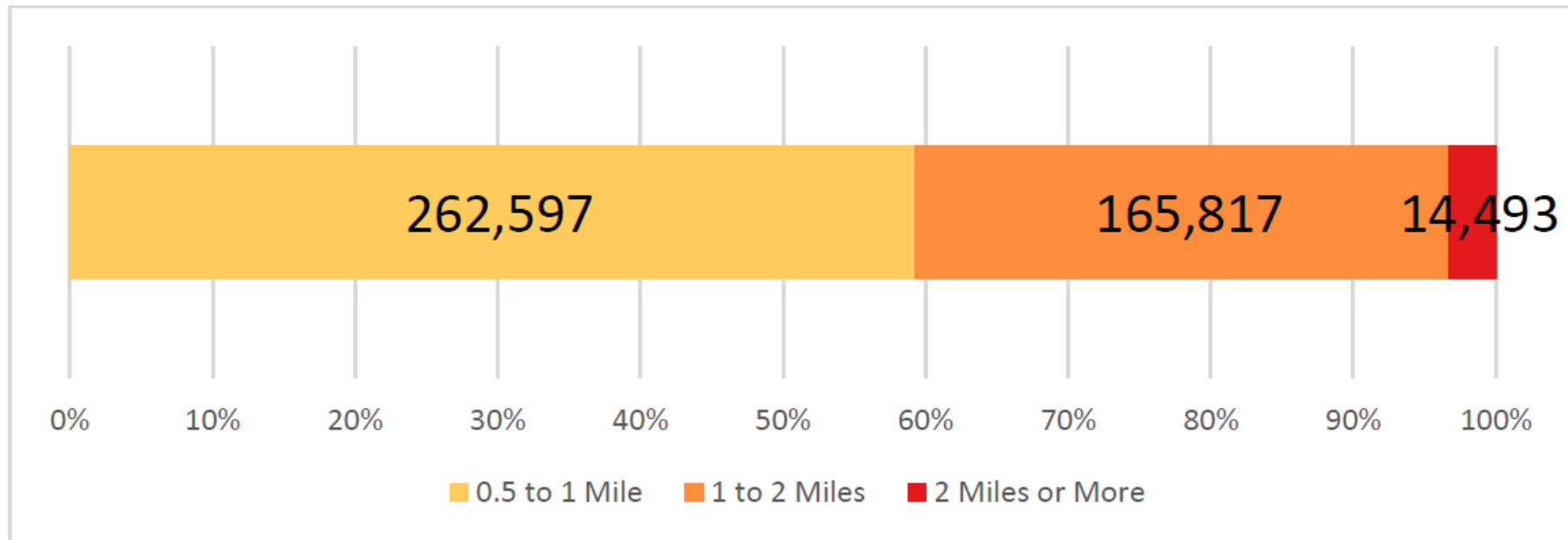




## Population by Distance from Grocery

- Over 165,000 residents live more than 1 mile from a grocery store
- Nearly 16,000 live more than 2 miles away.

**2018 DISTANCE FROM SUPERMARKET: Food Desert Populations, Countywide**

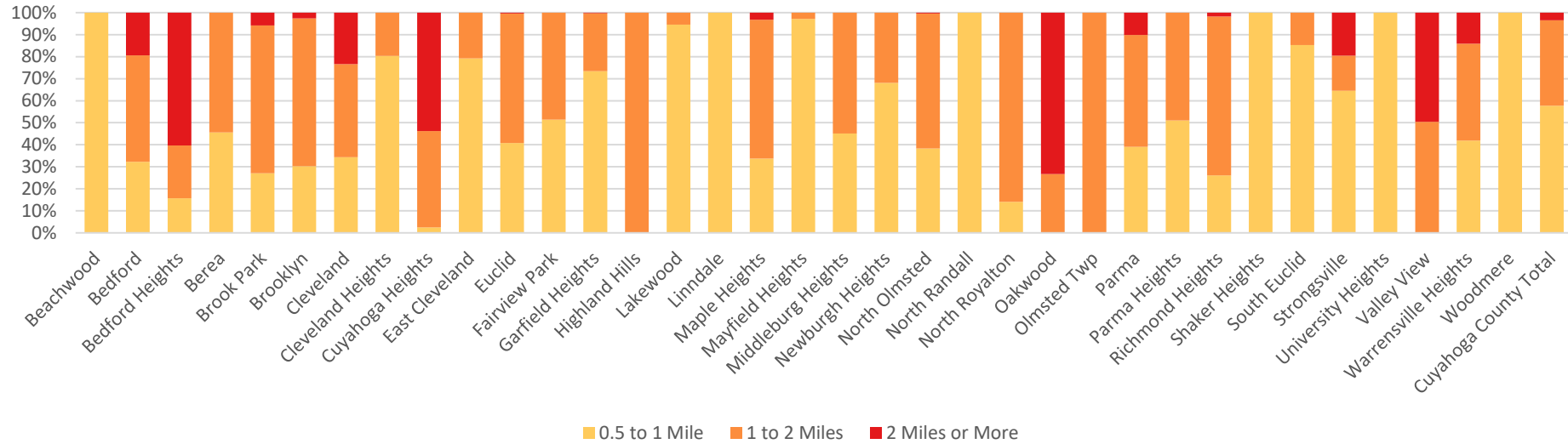




# Population by Distance from Grocery

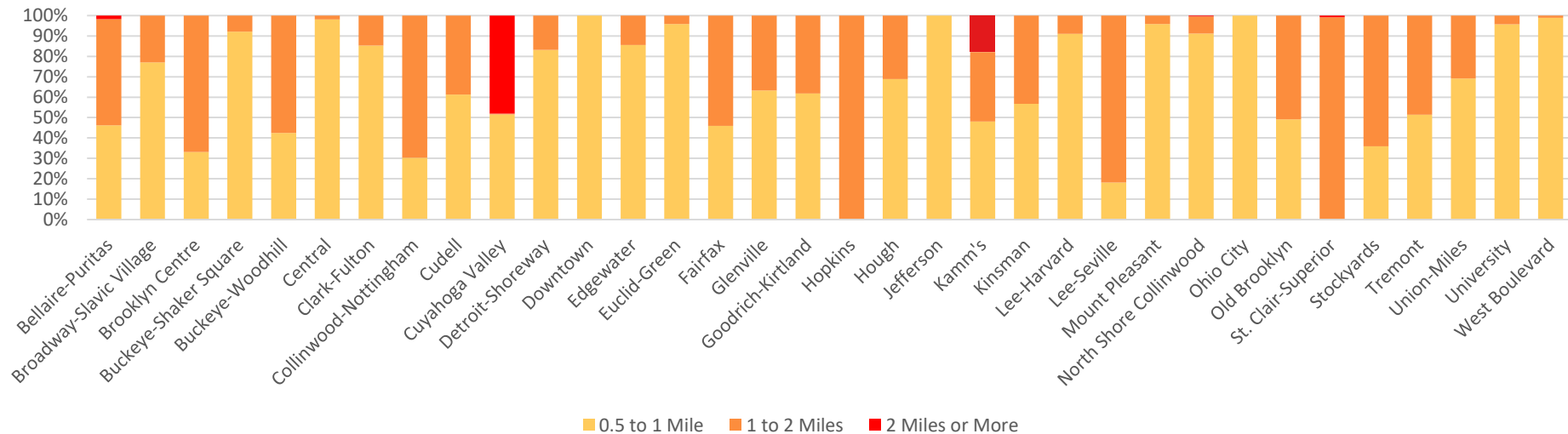
## Suburbs

Percent of Food Desert Population by Distance from Grocery



## SPAs

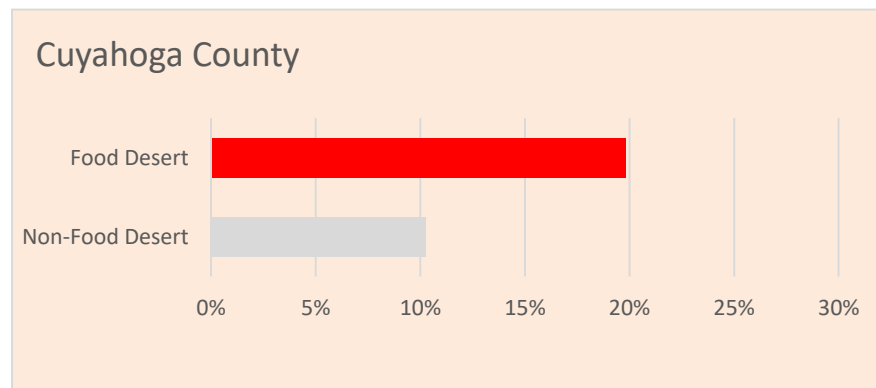
Percent of Food Desert Population by Distance from Grocery



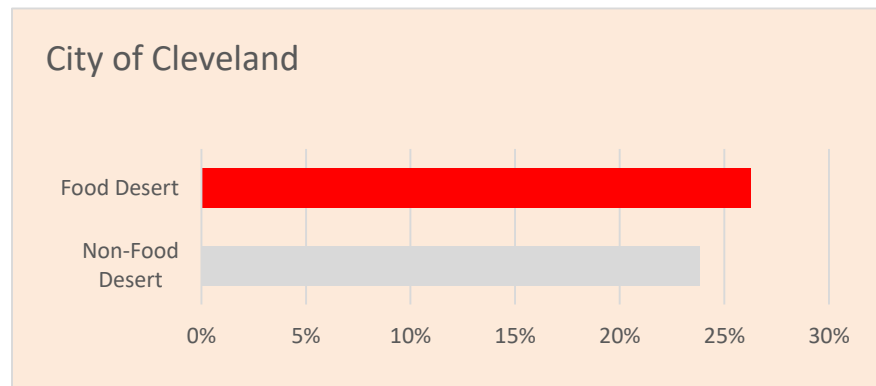


# Access to Vehicles

**Cuyahoga County:** 20% of food desert households have no vehicle  
Vs.  
10% in non-food desert areas

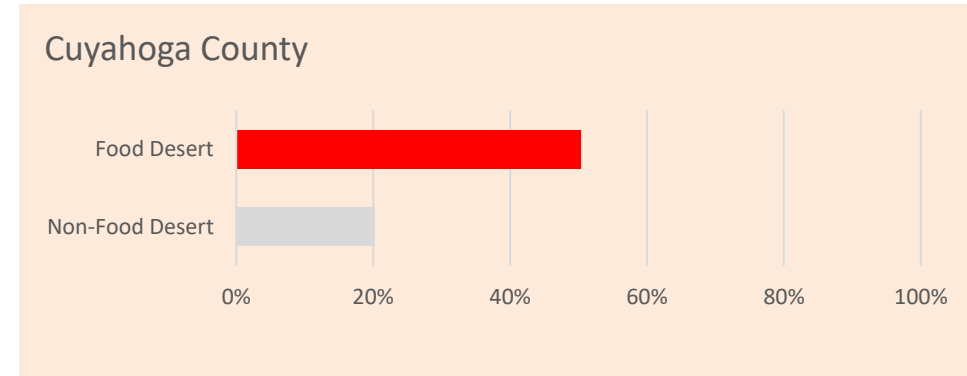


**City of Cleveland:** 26% of food desert households have no vehicle  
Vs.  
24% in non-food desert areas



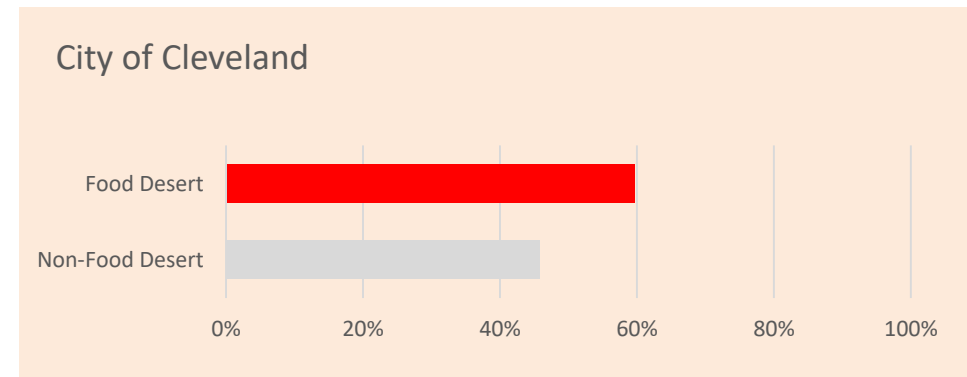
**Cuyahoga County:** over 220,000 persons living in food deserts are African-American – about 50% of the food desert population.

Vs. 20% African-American in non-food desert areas.

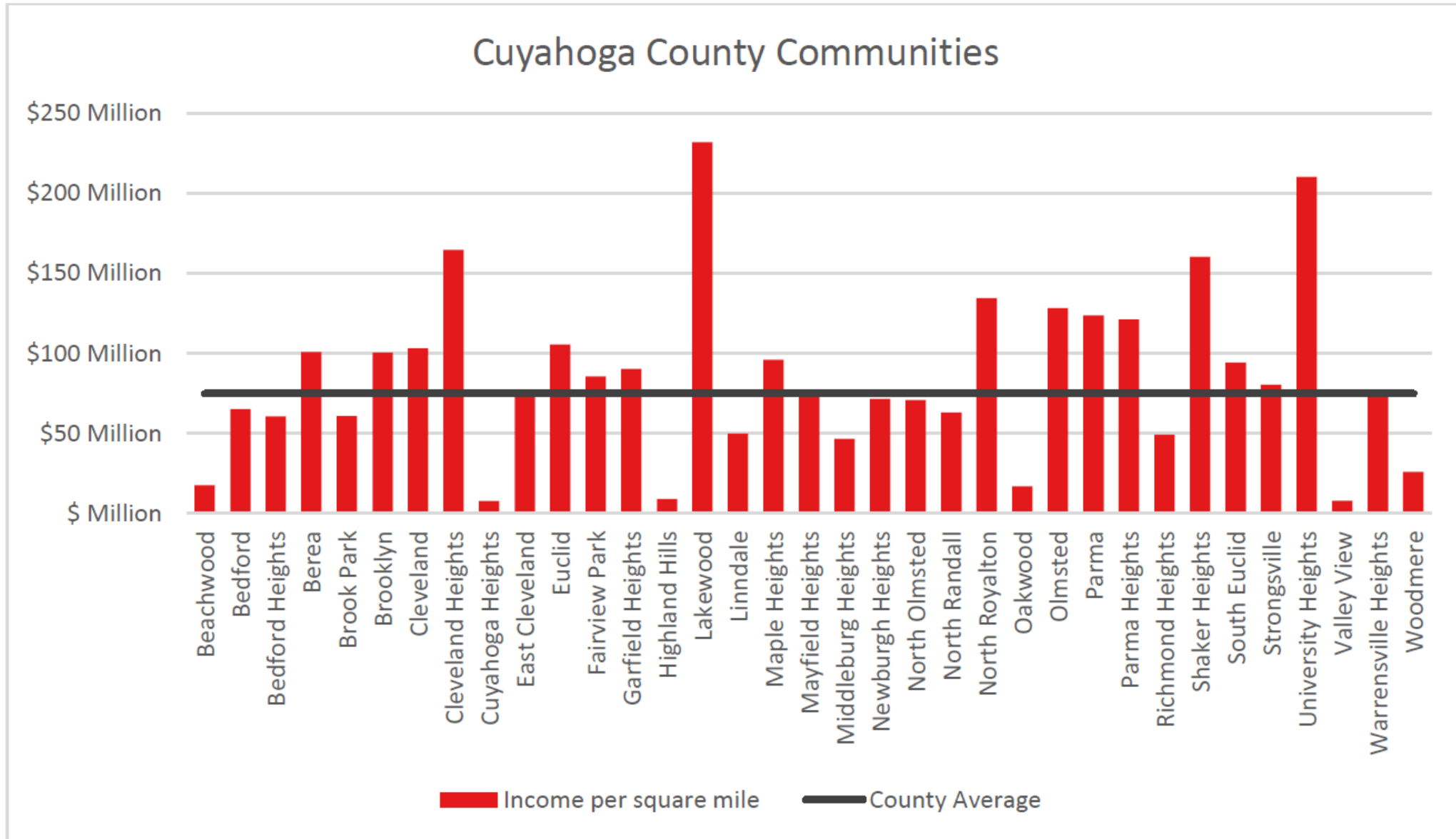


**City of Cleveland:** about 135,500 persons living in food deserts are African-American – nearly 60% of the food desert population.

vs. 46% African American in non-food desert areas.



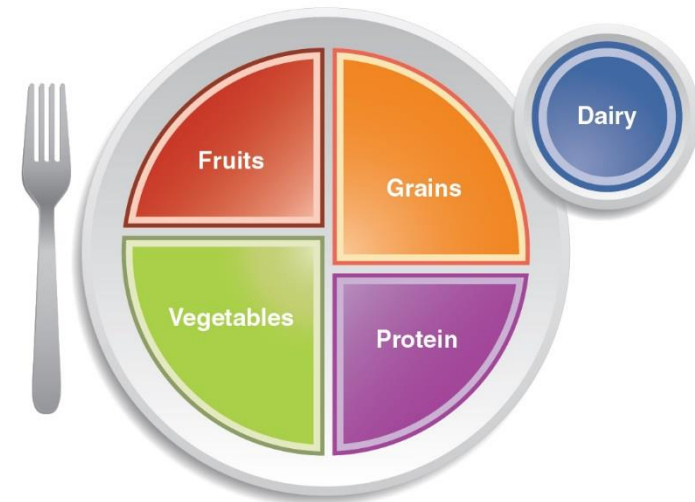
## INCOME DENSITY IN FOOD DESERTS, Communities & Cleveland Neighborhoods





## Diet-Related Disease Death Rates:

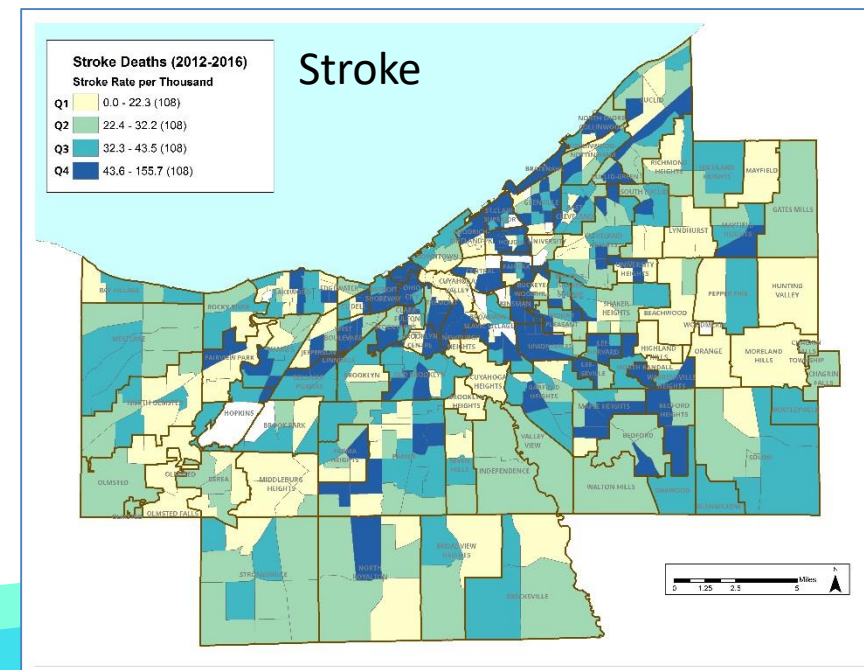
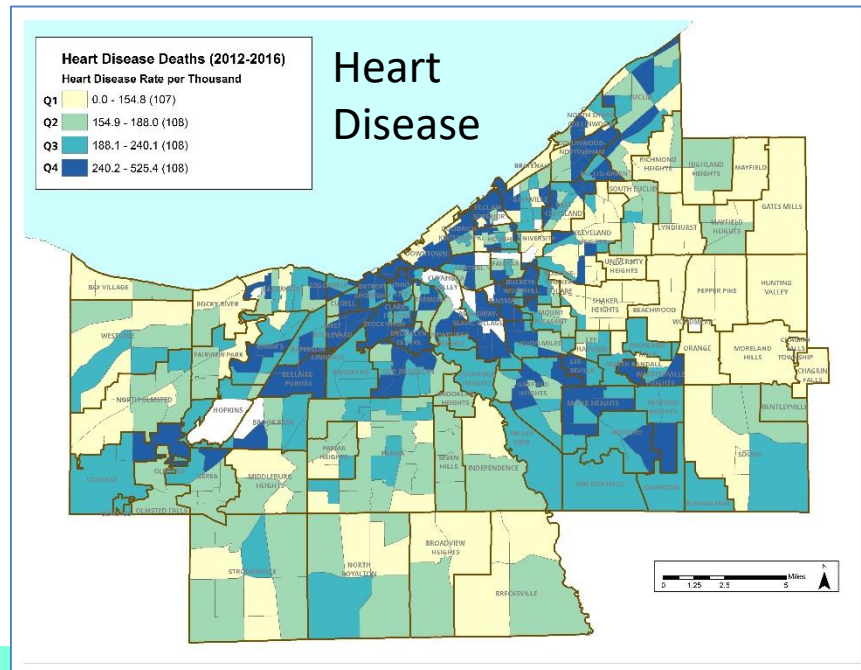
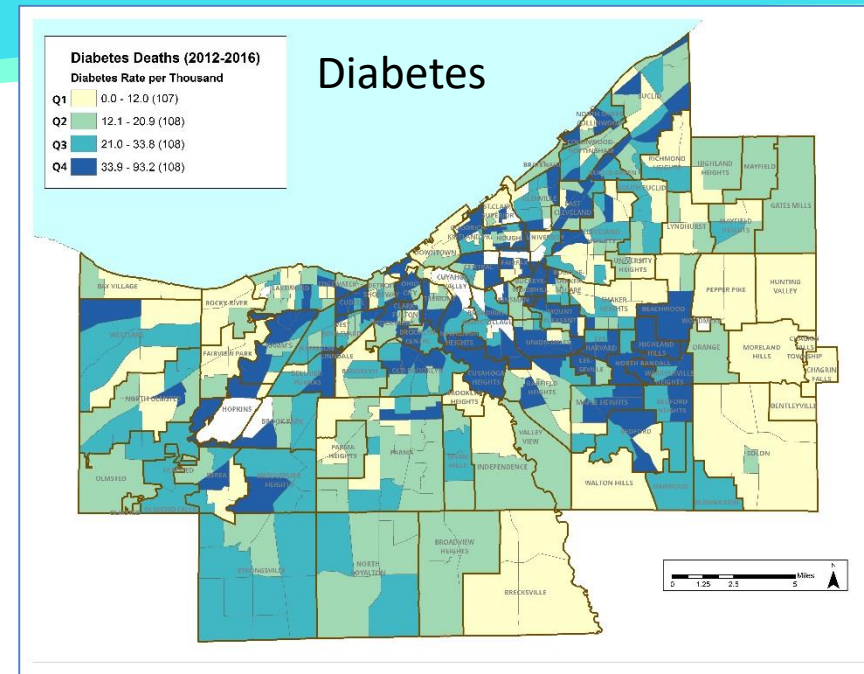
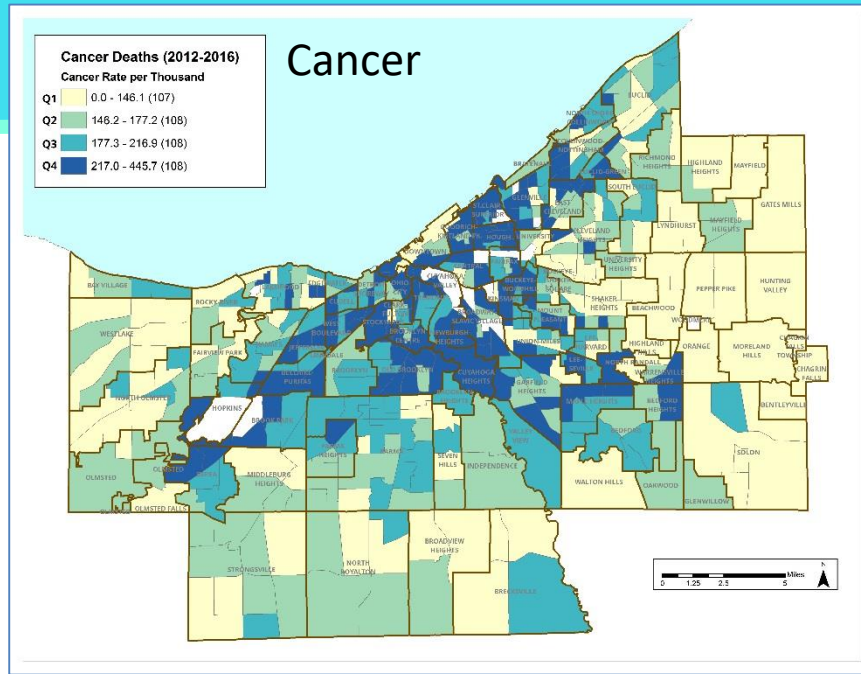
- “PRELIMINARY” data provided by the Ohio Department of Health
- Age-adjusted death rates (2011-2016), by Census Tract
- Deaths due to:
  - Heart Disease
  - Stroke
  - Cancer
  - Diabetes

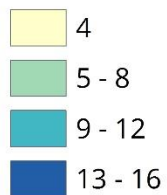


Choose**MyPlate**.gov



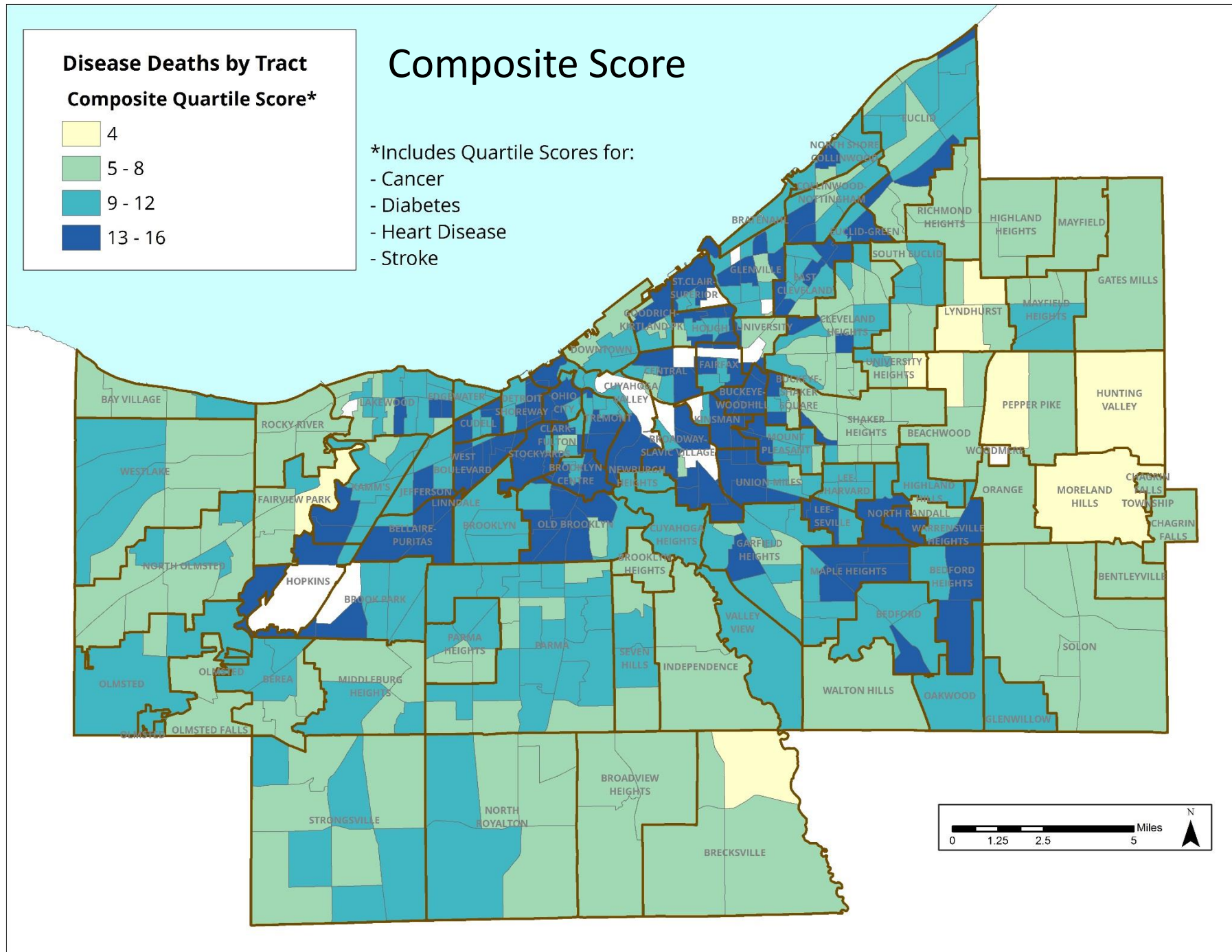
# Health Outcomes



**Composite Quartile Score\***

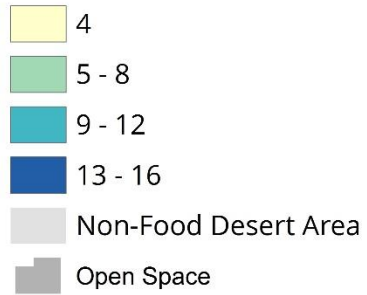
\*Includes Quartile Scores for:

- Cancer
- Diabetes
- Heart Disease
- Stroke





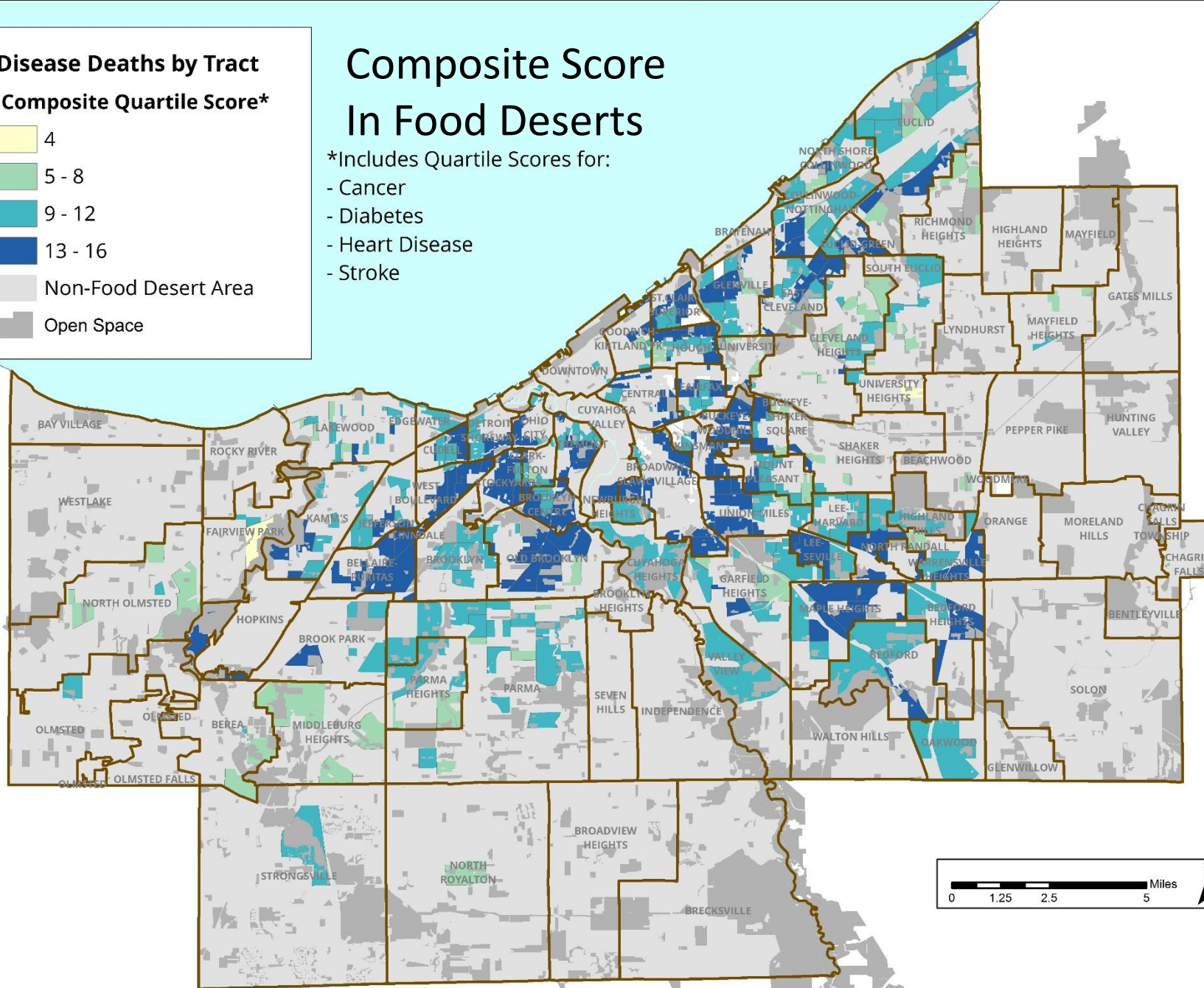
## Disease Deaths by Tract Composite Quartile Score\*



## Composite Score In Food Deserts

\*Includes Quartile Scores for:

- Cancer
- Diabetes
- Heart Disease
- Stroke



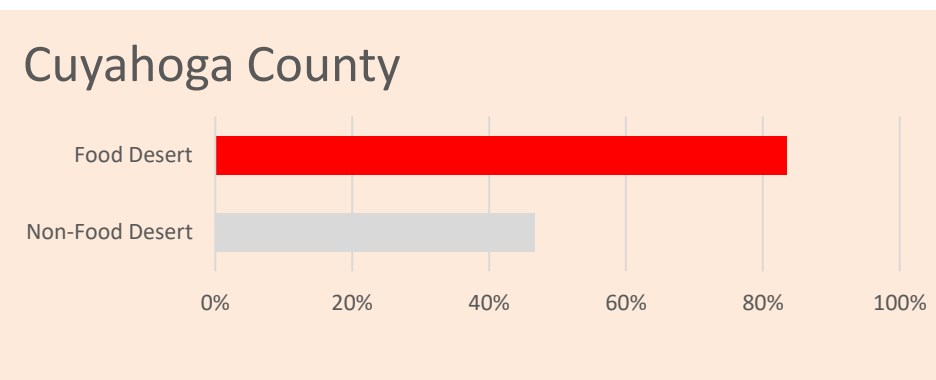


# Health Outcomes

**Cuyahoga County:** 83% (380,432) of food desert population had death rates in the upper half of composite scores (9-16)

Vs.

only 47% (378,517) in non-food desert areas of the County.

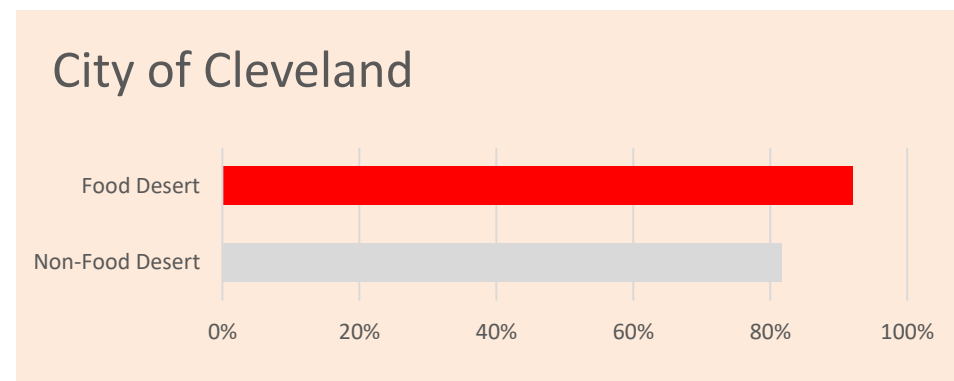


**City of Cleveland:** 92% (221,548)

in food deserts had disease death rates in the upper half of composite scores

Vs.

only 82% (151,437) in non-food desert areas of the City.







# Web Map



Cuyahoga County  
Planning Commission

## Cuyahoga County Supermarket Access, 2019

Cuyahoga County Board of Health Cleveland Department of Public Health



Find address or place



Lake Erie

### Information



The Cuyahoga County Supermarket Access Study was conducted by the Cuyahoga County Planning Commission, under contract to the Cuyahoga County Board of Health.

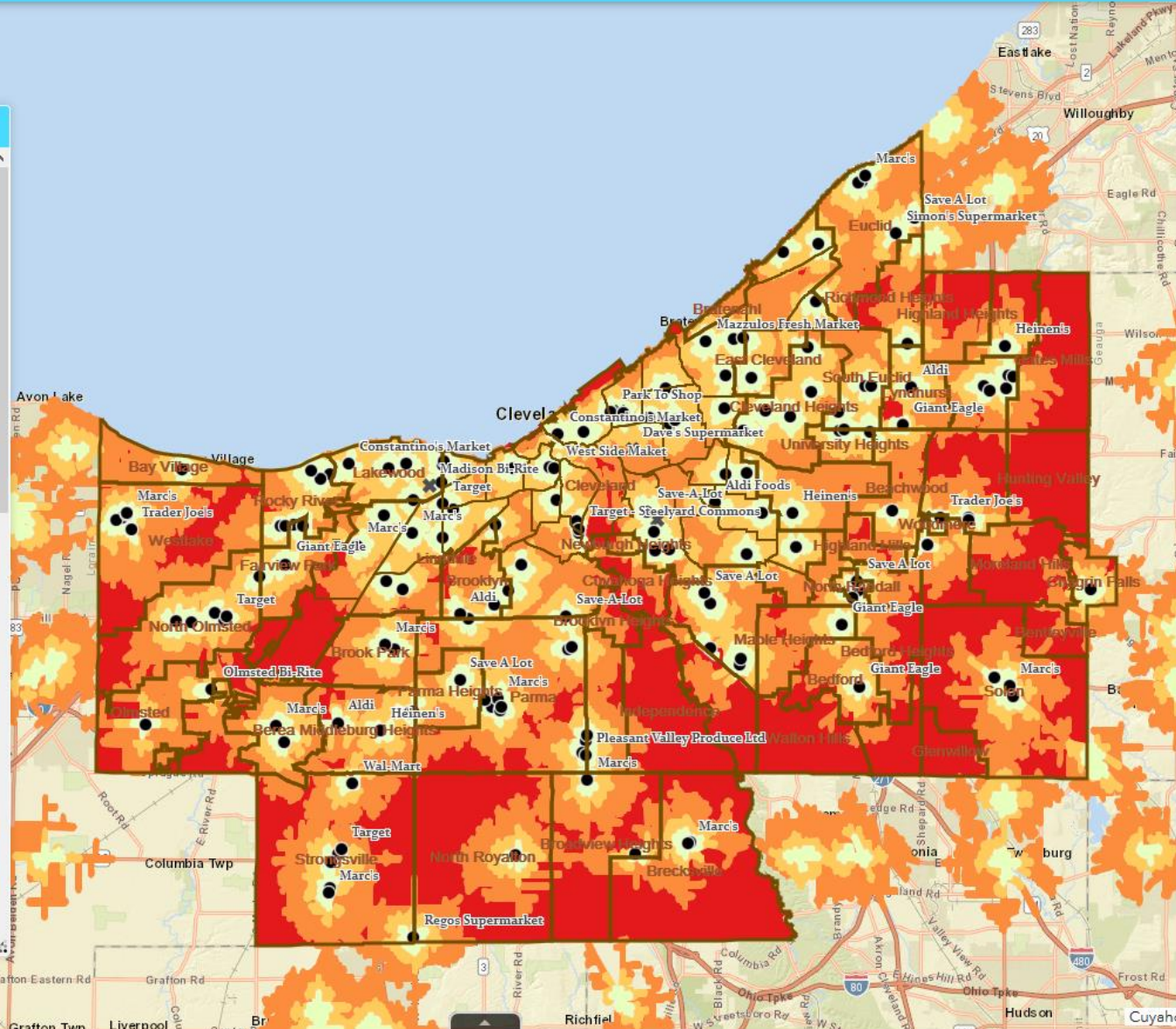
Only supermarkets and major grocery stores were considered for the study (generally 25,000 square feet or more). The store inventory was primarily developed from Retail Food Establishment records from the Cuyahoga County Board of Health and the City of Cleveland Department of Public Health, both obtained in November of 2018, and updated through February of 2019.

Areas are considered to have 'limited food access' if they meet BOTH of the following criteria:

- Areas more than 1/2 mile from the nearest supermarket; AND,
- Meet the poverty criteria: Must have more than 30% of its population falling below 200% of the federal poverty level.

Two sources were used for supporting socioeconomic and health data:

- American Community Survey (ACS), 2010-2014, U.S. Census Bureau: Data was collected at the census block group level of geography, and then proportioned down to the census block level using ratios of population and households for the relevant variables.
- Chronic Disease Deaths (2012-2016), Ohio Department of Health: Death rates from selected diet-related diseases, including Heart Disease, Cancer, Diabetes, and Stroke. Using reported death rates for each disease, census blocks were categorized by quartile for each type, and assigned a score from 1 (lowest rates) to 4 (highest rates). Quartile 'scores' were then compiled to a total score which could range from 4 (lowest quartile across all four disease types) to a maximum of 16 (highest quartile across all four disease types).



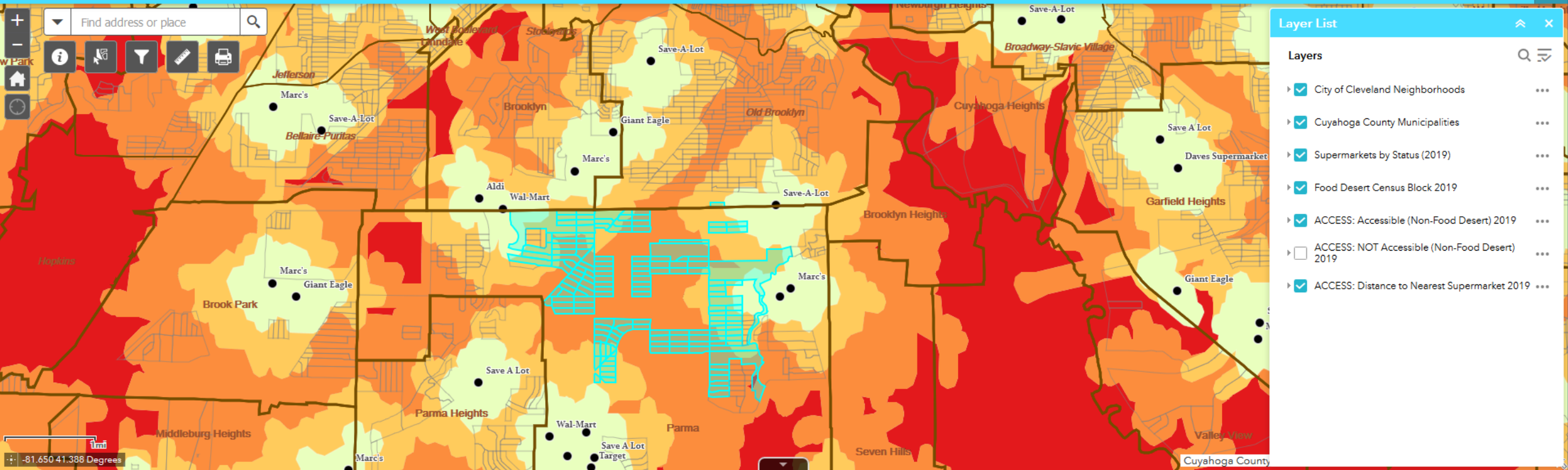
### Layer List

#### Layers

- ☒ City of Cleveland Neighborhoods ...
- ☒ Cuyahoga County Municipalities ...
- ☒ Supermarkets by Status (2019) ...
- ☒ Food Desert Census Block 2019 ...
- ☒ ACCESS: Accessible (Non-Food Desert) 2019 ...
- ☐ ACCESS: NOT Accessible (Non-Food Desert) 2019 ...
- ☒ ACCESS: Distance to Nearest Supermarket 2019 ...



# Web Map



City of Cleveland Neighborhoods Cuyahoga County Municipalities Supermarkets by Status (2019) Food Desert Census Block 2019 ACCESS: Accessible (Non-Food Desert) 2019 ACCESS: Distance to Nearest Supermarket 2019

Options Filter by map extent Zoom to Clear selection Refresh

Join_Count	TARGET_FID	GEOID10	AreaSqMi	SubSPA	Population - Total	Households - Total	Population - Minority	Population - Male	Persons 16+ in Labor Force	Persons 16+ Unemployed	Aggregate Household Income	Households with Income Less than 10000	Households with Income 10K to 14999	City Name	Households with Income 15K to 19999	Households with Income 20K to 24999	Households with Income 25K to 29999	Households with Income 30K to 34999
1	1,607	39035177303300	0.01	Parma	114.87	36.39	0.691965	48.71	56.88	4.43	2,199,587.22	1.01	6.04	Parma	3.40	0.00	0.00	1.13
1	1,609	39035177501201	0.01	Parma	102.96	44.51	7.7887368	46.19	54.30	6.98	2,201,459.06	4.79	4.20	Parma	2.39	2.08	4.47	2.62
1	1,610	39035177501200	0.01	Parma	65.34	30.00	4.9428522	29.31	34.46	4.43	1,483,592.72	3.22	2.83	Parma	1.61	1.40	3.01	1.76
1	1,614	39035177403100	0.01	Parma	17.49	8.35	0	8.32	8.19	0.24	451,556.72	0.73	0.00	Parma	0.52	1.36	0.24	0.79

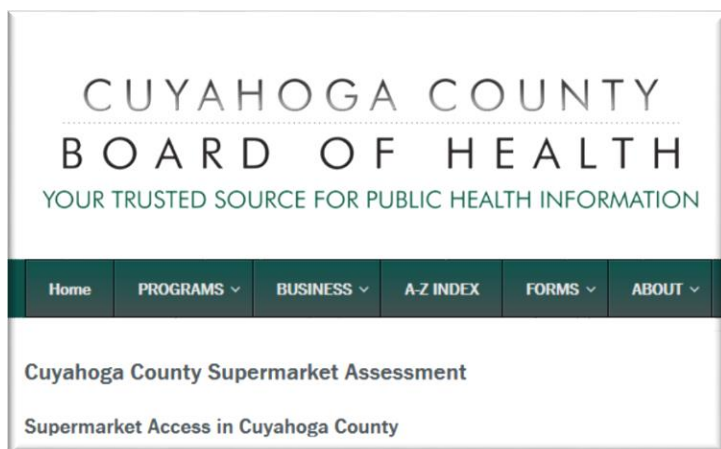




# Final Report and Interactive Map



[countyplanning.us/projects/creating-healthy-communities/](https://countyplanning.us/projects/creating-healthy-communities/)



[ccbh.net/cuyahoga-county-supermarket-assessment/](https://ccbh.net/cuyahoga-county-supermarket-assessment/)



County Planning

FOR OUR COMMUNITY  
FOR OUR REGION  
FOR OUR FUTURE

CUYAHOGA COUNTY  
BOARD OF HEALTH

YOUR TRUSTED SOURCE FOR PUBLIC HEALTH INFORMATION



## Cuyahoga County Supermarket Assessment 2018 Inventory Update

Prepared by:

**Cuyahoga County Planning Commission**  
2079 East 9<sup>th</sup> Street, Suite 5-300  
Cleveland, Ohio 44115

Prepared for:

**Cuyahoga County Board of Health**  
5550 Venture Drive  
Parma, Ohio 44130

Final Report Issued:

**March 8, 2019**



# Thank you!

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