

The background of the slide is a grayscale aerial photograph of a city. The image shows a complex network of winding waterways, possibly rivers or canals, which dominate the upper half of the frame. Below the waterways, there are extensive industrial or urban areas with a grid-like pattern of roads and buildings. In the lower half, there are more residential or commercial developments. The overall scene is a mix of natural and human-made landscapes.

# Comparing Food Deserts: 2010 & 2019

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# Overview

## The Issue

Food Insecurity  
Food Deserts



## A Closer Look

Washington, DC



## Programs

SNAP, EBT,  
WIC



## Conclusions

Recommendations  
Future Research



# “Food Insecurity” and “Food Desert” Defined

***Food Insecurity*** is a household-level economic and social condition of limited or uncertain access to adequate food.

A ***Food Desert*** is a low-income census tract where a substantial number of residents do not have easy access to a supermarket or large grocery store.

Source: US Department of Agriculture

# Food Deserts in the News: Buffalo

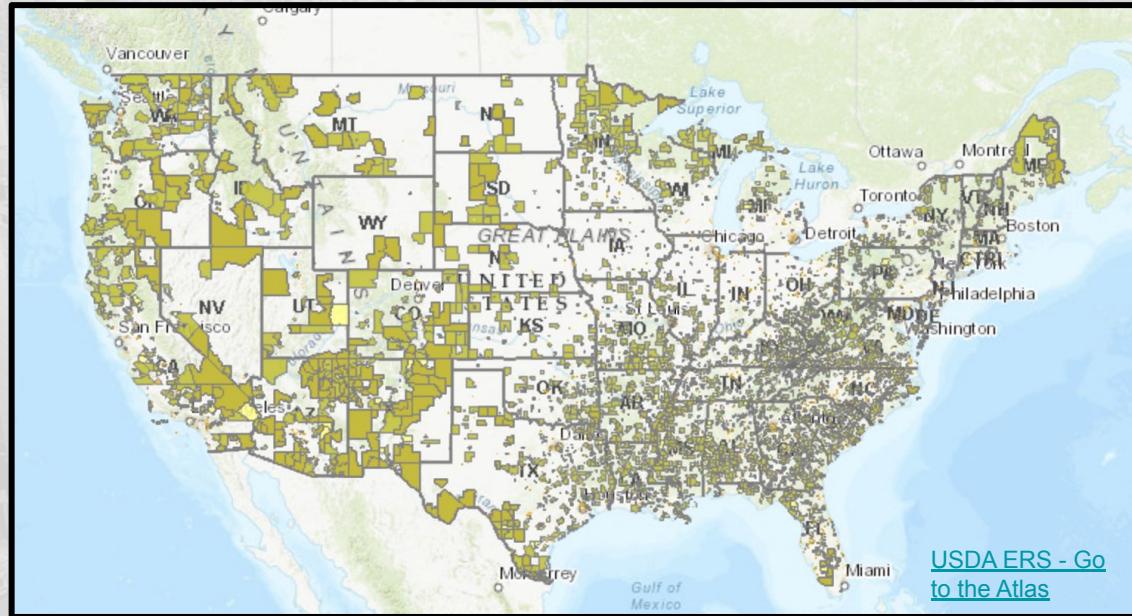
*“The beloved Tops is the only supermarket in a one-mile radius within this largely Black neighborhood and one that took more than a decade to get.”*

*“The nearest grocery store is a Wegmans, which is about 4 miles away. Although it’s a 15-minute drive, public transportation could make the journey up to an hour long.”*

Source: [CNN](#)

# Food Insecurity and Food Deserts in the US

At least **13.5 million** people in the US are food insecure.



Almost **1 in 5** households with children are food insecure.

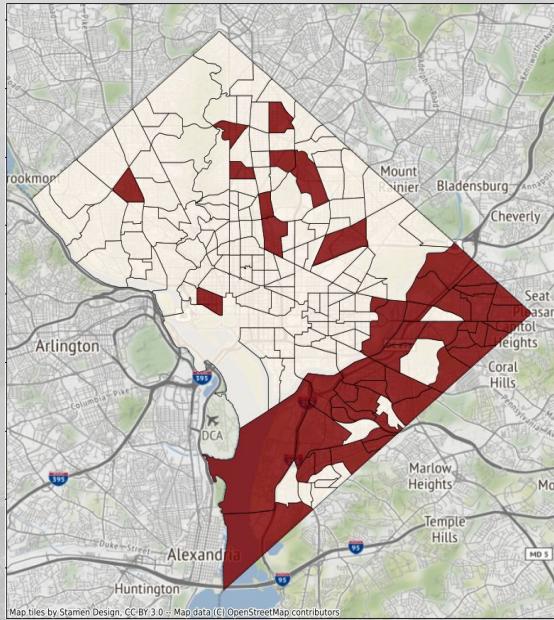
Nearly **10%** of census tracts (approximately **6,400 out of 70,000**) are food deserts.

# Problem Statement

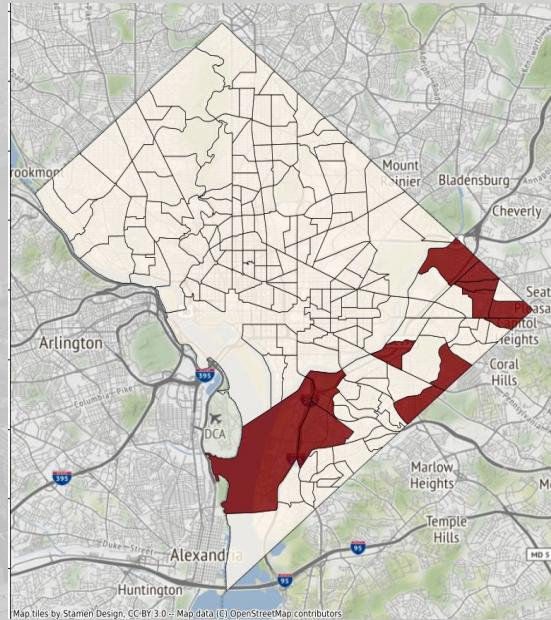
*How did the Washington, DC food desert landscape change between 2010 - 2019 and what inferences can we draw?*

# USDA Food Desert Main Categories

Defining low-income low-access (LiLa) census tracts



**Poverty rate > 20%**  
**> 0.5 miles to supermarket**

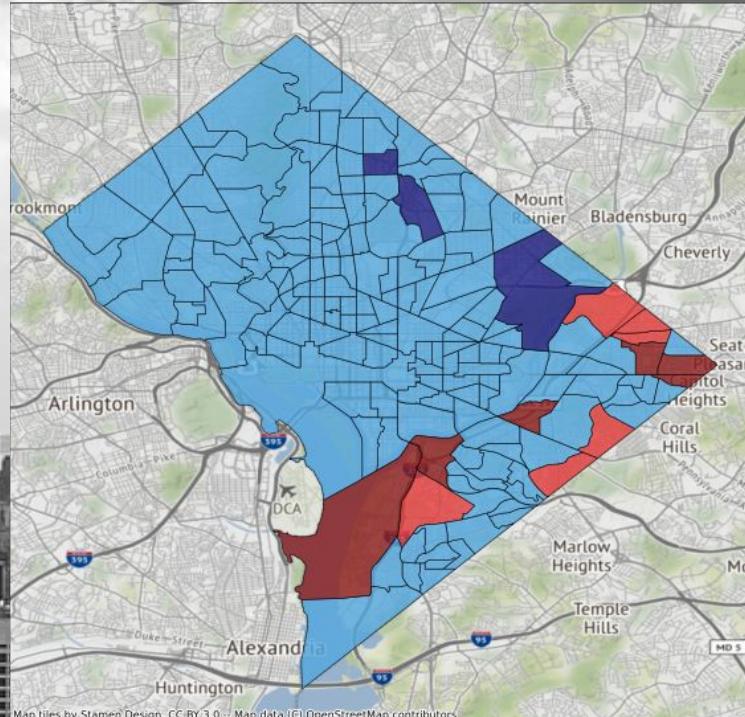


**Poverty rate > 20%**  
**> 1 mile to supermarket**

# A Closer Look at D.C.

## Washington, D.C.

- Focus on **1 mile** urban
- Food Desert Status
- Engineering
- 2010 and 2019 Comparison



Became a Food  
Desert

6

Became Food  
Accessible

3

Remained a  
Food Desert

6

Remained Food  
Accessible

164

## Compared to D.C. Averages

D.C. Overall

Remained Food Deserts

Became Food Deserts

Income Per Capita

\$ 51,810

Income Per Capita

\$ 25,281

Income Per Capita

\$ 22,482

Poverty Rate

17.5%

Poverty Rate

26.9%

Poverty Rate

29.9%

Unemployment Rate

8.9%

Unemployment Rate

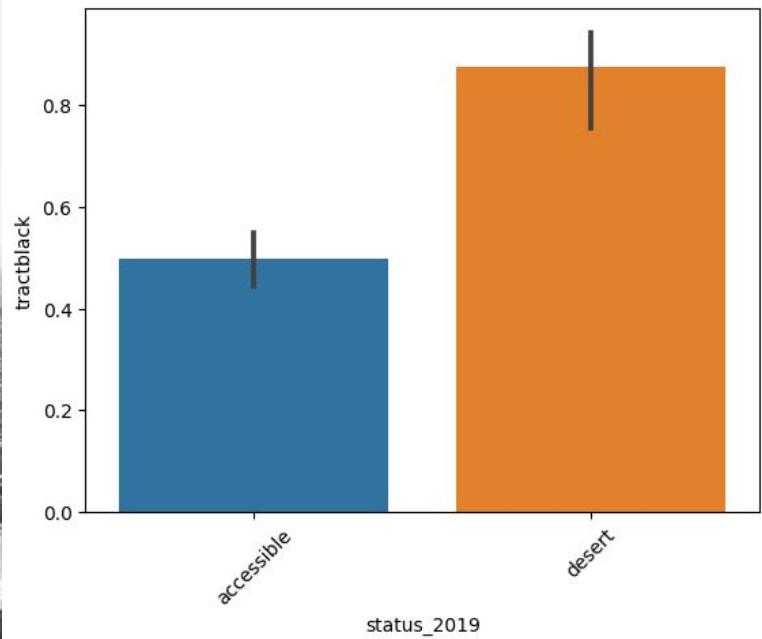
17.2%

Unemployment Rate

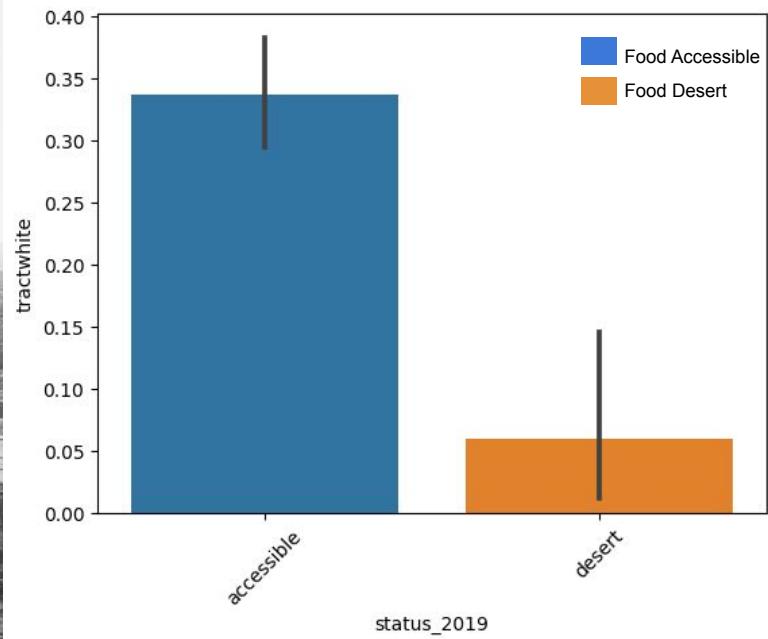
15.2%

# Demographics

% Black Population by Tract Status



% White Population by Tract Status



# Governmental Efforts to Increase Access to Food and Nutrition

**SNAP** Supplemental Nutrition Assistance Program

**WIC** Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)

## **SNAP Online**

- Introduced through the 2014 Farm Bill
- Available in all States (except Hawaii and Alaska) through authorized retailers
- Purchase groceries online, for delivery or pickup, using Electronic Benefit Transfer (EBT) Card

# Where SNAP Misses the Gap

## Individual Limitations:

- Staple foods predefined
- Cannot use for delivery or service fees
- Avg is \$121 per person per month (\$1.40 per meal)

## Retailer Limitations:

- Must meet either criteria:
    - Continuously stock staple foods
- OR
- Have over 50 % of total gross retail sales from sale of staple foods

# SNAP in DC

## List of SNAP Online Retailers in D.C.:

- ALDI
- Amazon
- Giant of Maryland
- Safeway

2010

73 Authorized  
Retailers

15.3% Poverty  
Rate

2019

58 Authorized  
Retailers

12.3% Poverty  
Rate

There was a decrease poverty rate for D.C. overall, but that isn't reflective of the poverty rates within D.C. food deserts

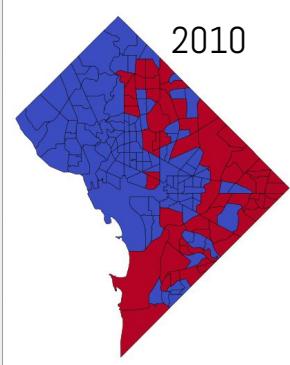
# Efforts to reduce food deserts over the past decade

**\$220 million in public funds, \$1 billion in private investment**

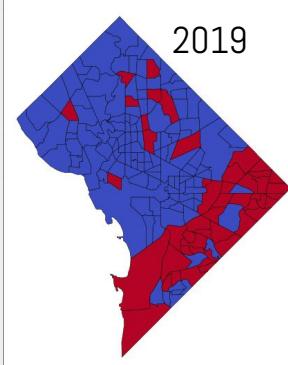
**Funded 1,000+ retailers serving food deserts in 35 states**

- NIH "[The Changing Landscape of Food Deserts](#)" (2019)

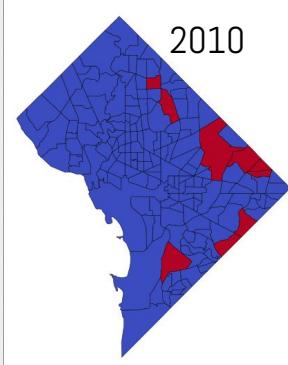
Half-Mile Food Desert



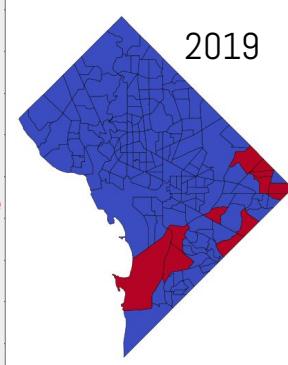
7% decrease



1-Mile Food Desert



1.7% increase



# Differences between 2010 and 2019

	US Overall		DC	
	half-mile	1-mile	half-mile	1-mile
<b>2010</b>	<b>27.2%</b> (19k of 72k)	<b>12.3%</b> (9k of 72k)	<b>34.0%</b> (61 of 179)	<b>5.0%</b> (9 of 179)
<b>2019</b>	<b>27.9%</b> (20k of 72k)	<b>12.8%</b> (9.2k of 72k)	<b>27.0%</b> (49 of 179)	<b>6.7%</b> (12 of 179)
<b>Difference</b>	<b>(▲ 0.7%)</b>	<b>(▲ 0.5%)</b>	<b>(▼ 7%)</b>	<b>(▲ 1.7%)</b>

Despite efforts, attracting for-profit grocers to food deserts  
may not be the best way to improve food access

## Conclusion: Missing the Point

- Despite investment, food deserts have largely not been improved
- Further consolidation of small grocers means fewer stores farther away
- Even with increased access to stores, low-income residents may not have the funds to purchase healthy foods due to SNAP limitations
- Food deserts as a measurement may become obsolete due to grocery delivery, but that may not change nutrition outcomes or food insecurity

## Future recommendations

- Increasing SNAP benefits per person
- Funding more nonprofit grocers
- Subsidizing prices of healthy foods for low-income areas

**“In the end, it is how much money we have, not how much access we have to the supermarket, that determines our food choices.”**

- H. Gilligan, *Slate*



The background image is a high-angle aerial photograph of a city. It features a large, winding river or waterway that cuts through the urban landscape. The city below is a mix of residential areas with dense clusters of buildings, commercial zones with larger structures and parking lots, and industrial sections with various facilities and roads. The overall scene is a blend of natural water bodies and human-made infrastructure.

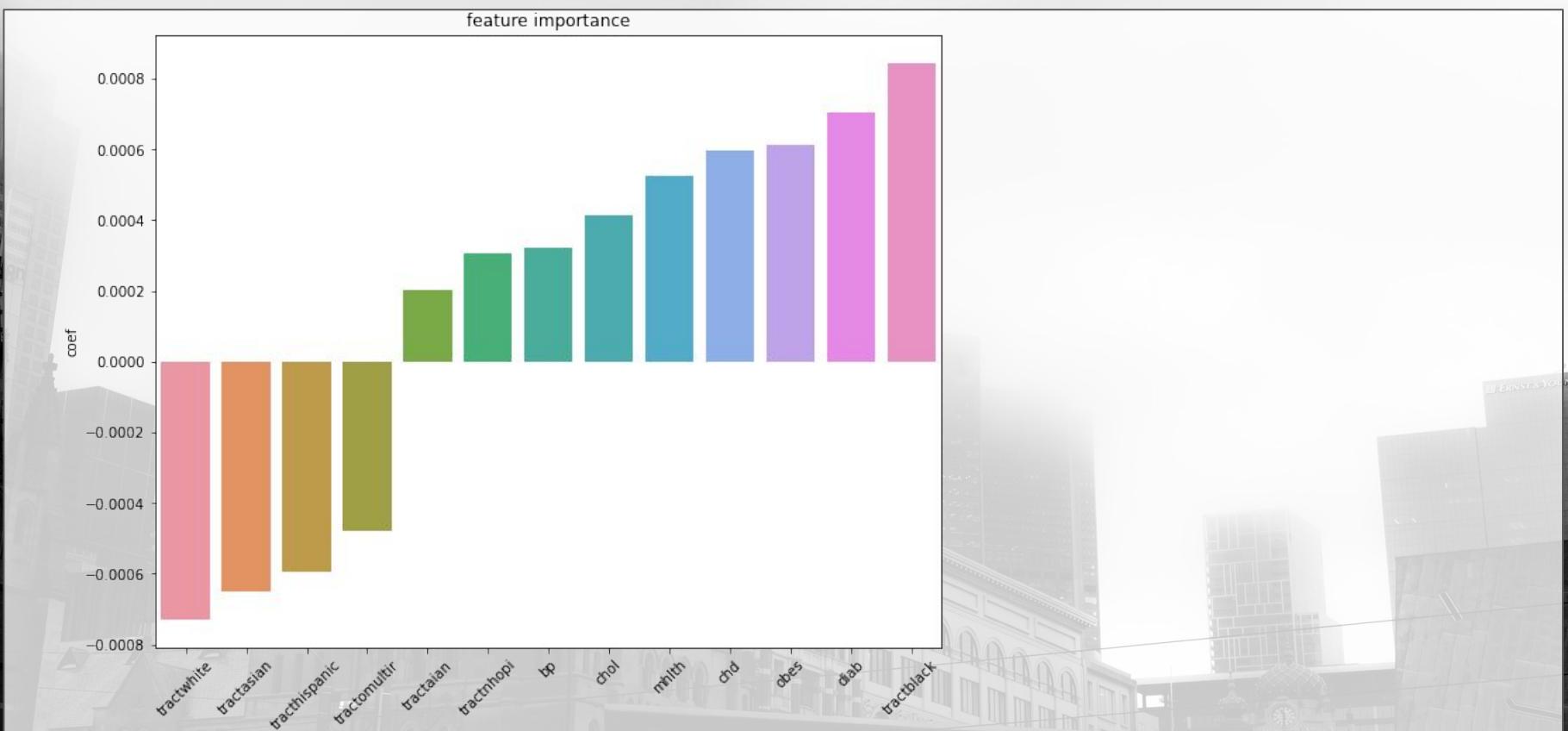
Thank You

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Questions?

# Supplemental slide - simple Logistic Regression Model



# Connect to Sources

[Definitions of Food Security.](#)

['We didn't have much, and you took what was left'](#)

[USDA ERS - Go to the Atlas](#)

[History, Background, and Goals of the Supplemental Nutrition Assistance Program.](#)

[Special Supplemental Nutrition Program for Women, Infants, and Children \(WIC\)](#)

[HR2642 - 113th Congress \(2013-2014\): Agricultural Act of 2014](#)

[Stores Accepting SNAP Online | Food and Nutrition Service](#)

[What Can SNAP Buy? | Food and Nutrition Service](#)

[Online grocery delivery is about to kill food deserts](#)

[Stores Accepting SNAP Online | Food and Nutrition Service](#)

[PL 88-525 - Food and Nutrition Act of 2008](#)

[Restaurant Meals Program | Food and Nutrition Service](#)

[Healthy Food Financing Initiative - The State of Childhood Obesity](#)

[The changing landscape of food deserts - PMC](#)

[The prevalence of food insecurity in 2020 is unchanged from 2019](#)

[The Real Farm Subsidy Scandal? USDA's Legacy of Racial Discrimination. | Environmental Working Group](#)

<https://fns-prod.azureedge.us/sites/default/files/resource-files/SNAPsummary-5.pdf>

[https://www.census.gov/data-tools/demo/saipe/#/?map\\_geoSelector=aa\\_s&s\\_state=11&s\\_year=2020.2019&map\\_yearSelector=2019](https://www.census.gov/data-tools/demo/saipe/#/?map_geoSelector=aa_s&s_state=11&s_year=2020.2019&map_yearSelector=2019)

# Data Sources

Food Access Research Atlas - USDA

<https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/>

Social Vulnerability Index - CDC

[https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance\\_svi.html](https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance_svi.html)

PLACES: Local Data for Better Health - CDC

<https://chronicdata.cdc.gov/500-Cities-Places/500-Cities-Census-Tract-level-Data-GIS-Friendly-Fo/k86t-wghb>

SNAP Online - USDA

<https://www.ers.usda.gov/amber-waves/2021/july/online-supplemental-nutrition-assistance-program-snap-purchasing-grew-substantially-in-2020/>

# Definitions

## Low-income neighborhoods

The criteria for identifying a census tract as low income are from the Department of Treasury's New Markets Tax Credit (NMTA) program. This program defines a low-income census tract as any tract where:

- The tract's poverty rate is 20 percent or greater; or
- The tract's median family income is less than or equal to 80 percent of the State-wide median family income; or
- The tract is in a metropolitan area and has a median family income less than or equal to 80 percent of the metropolitan area's median family income.

<https://www.ers.usda.gov/data-products/food-access-research-atlas/documentation/>