

DataGood Interactive Map



The Team



Mina Baghai
Project Manager



Rohan Agarwal
Project Manager



Annie Pang
Project Member



Christy Quang
Project Member



Daniel Tom
Project Member



Helen Nguyen
Project Member



Manan Bhargava
Project Member



Ricky Shishodia
Project Member

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Project Sourcing





Leading the **fight** to
end hunger, in
partnership with their
community and in
service of their
neighbors in need.

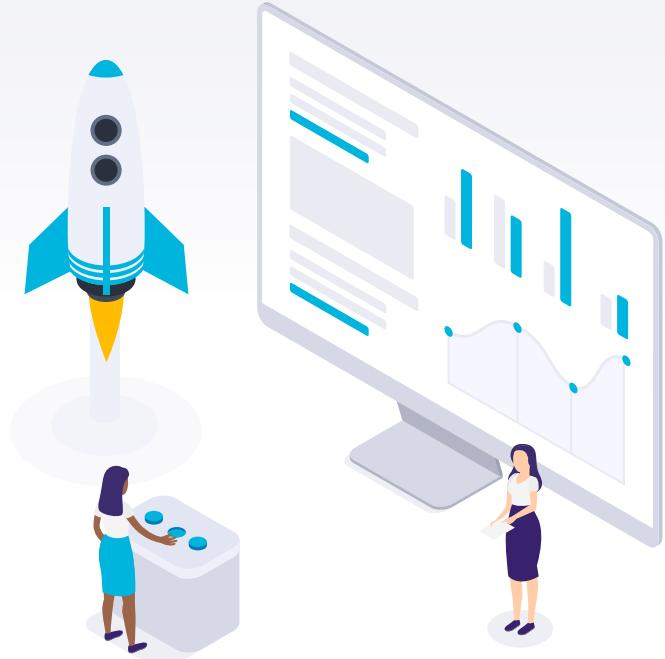


Project Goals

- ▶ Enhance Food Bank of Contra Costa & Solana's Interactive Map
 - ▷ With Tableau
- ▶ Utilize Census Data
- ▶ Identify Food Swamps

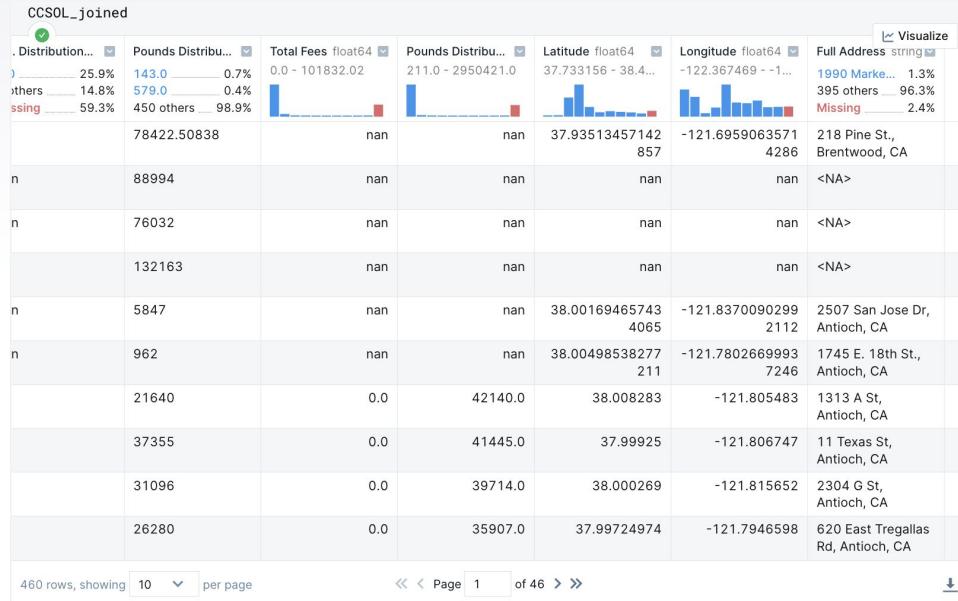
Food Distribution

Data Provided by Food Bank Contra Costa
and Solano

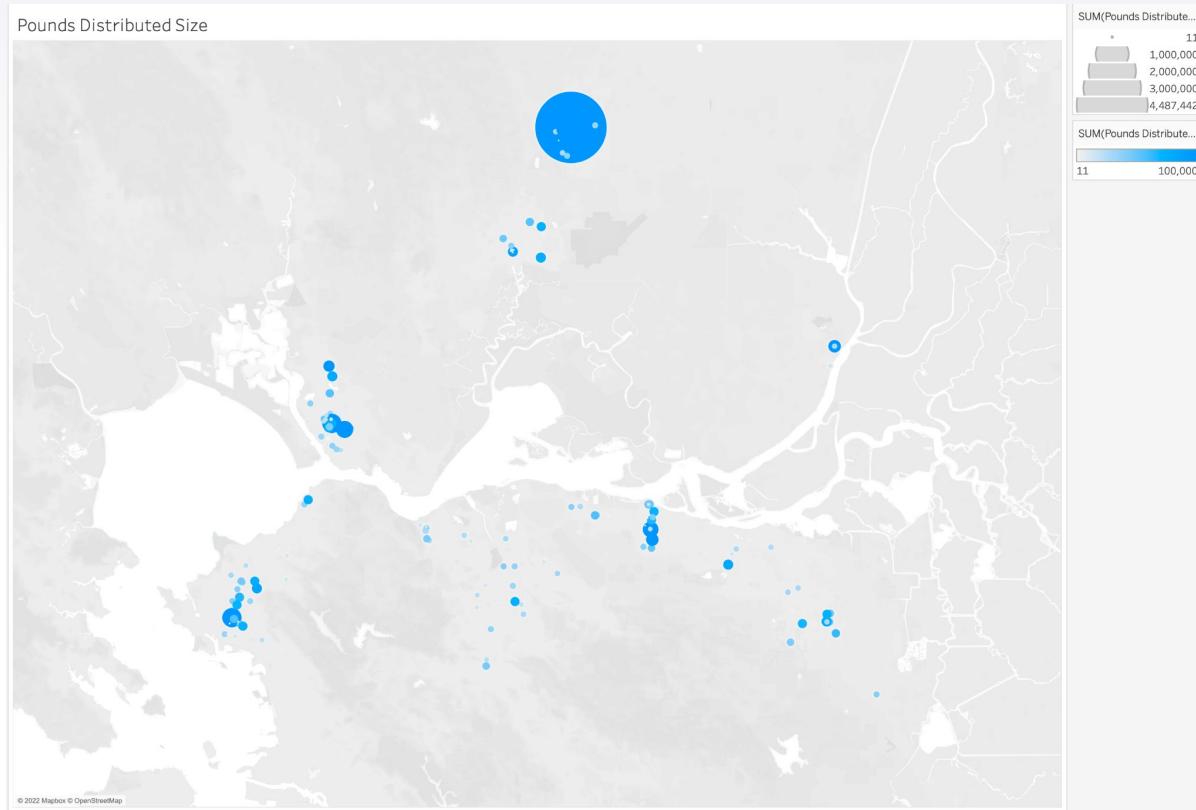


Process

1. Understanding the data
2. Data cleaning + merging relevant columns from the different datasets
3. Missing values (latitude & longitude)
 - a. Full addresses
4. Census tract



Pounds Distributed



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Demographic Data

Additional Layers to the Map



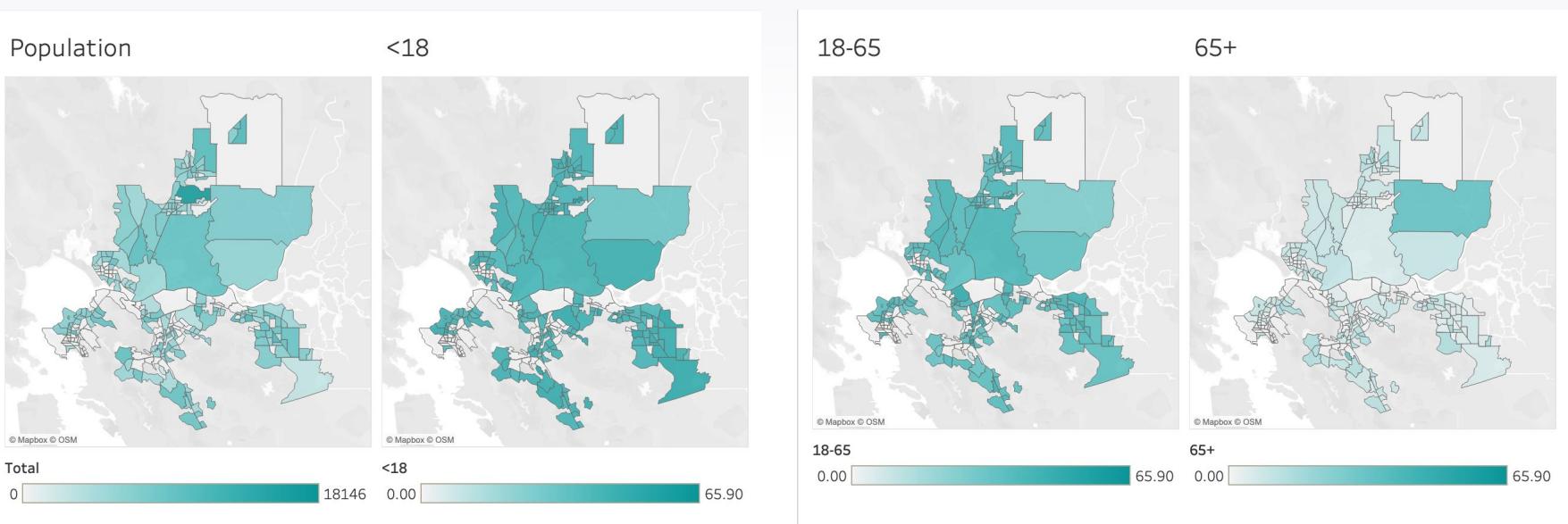
► Demographic Factors

- ▶ Race & ethnicity
- ▶ Population size
- ▶ Population by age
- ▶ Food stamp program participation

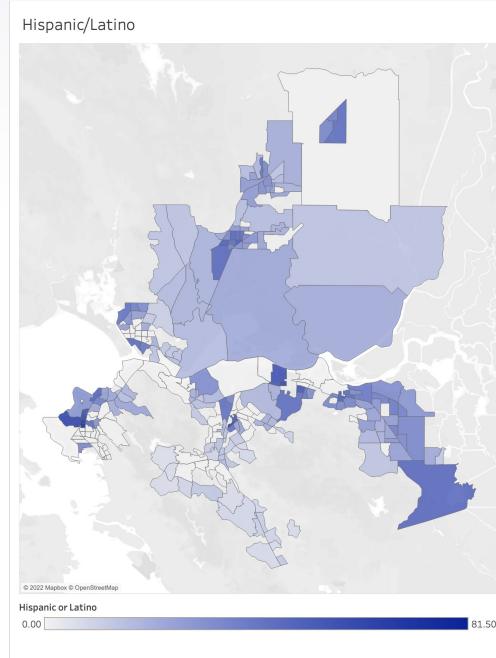
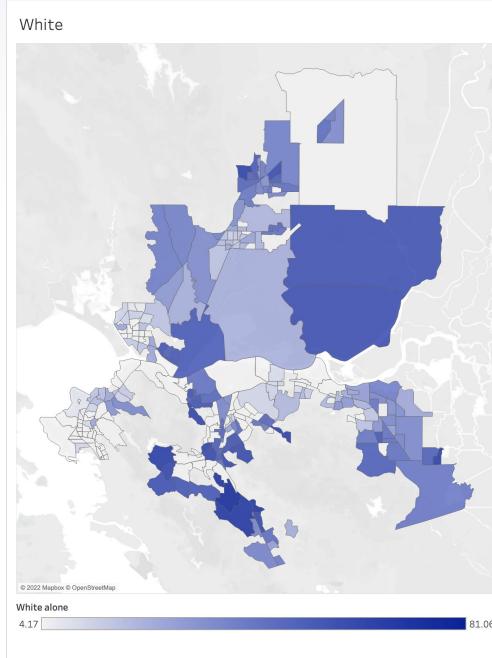
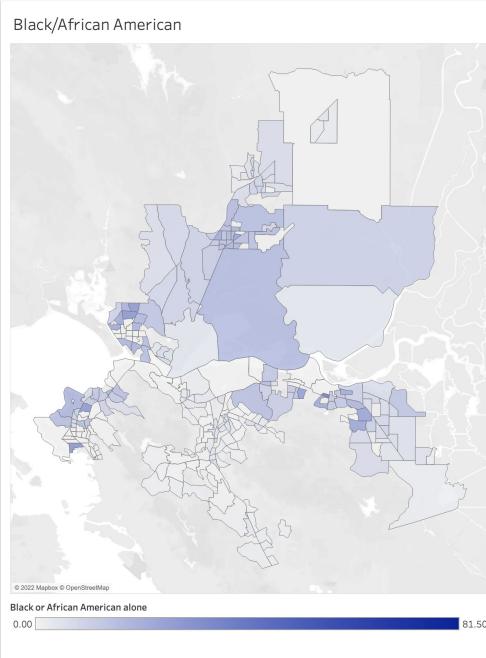
► Data Collection/Manipulation

- ▶ 2020 Census(census.gov)
- ▶ Data cleaning in Deepnote
- ▶ Merged with shapefiles for census tracts
- ▶ Overlayed on Tableau

Population by Age

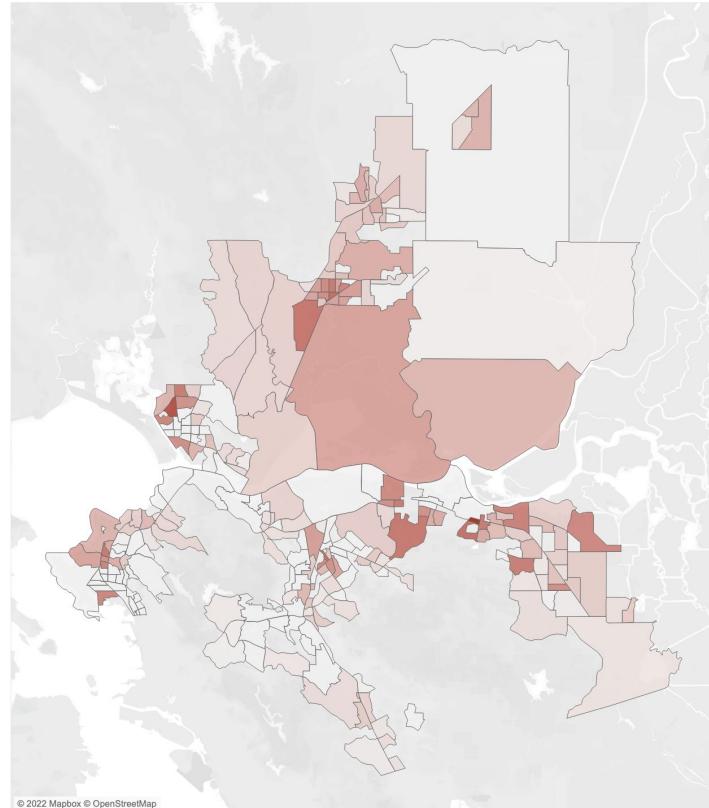


Race & Ethnicity



► Food Stamps

With Food Stamps



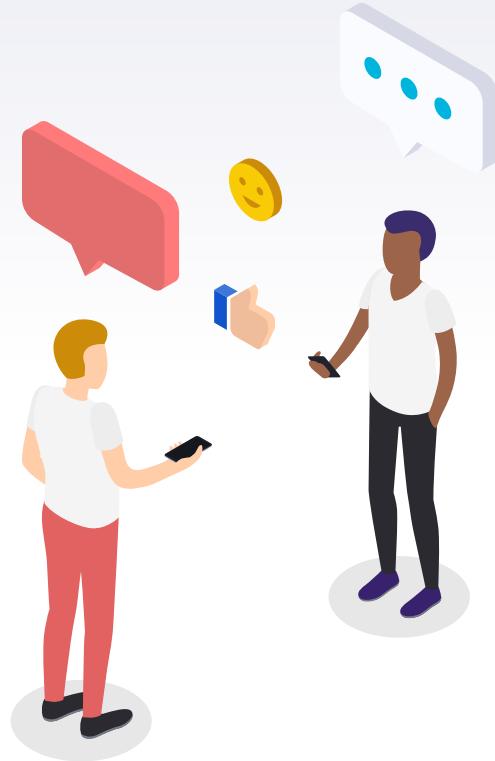
With cash public assistance or Food Stamps/SNAP



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Data on Food Swamps

Which areas lack nutritional food resources?



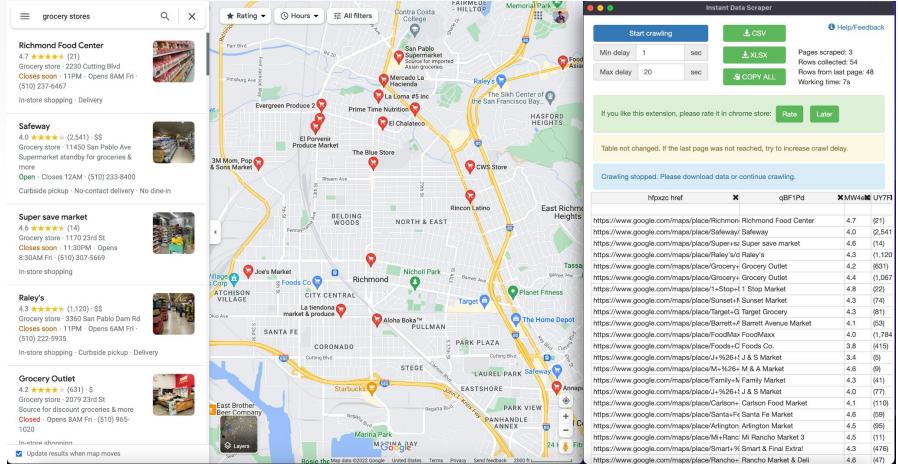
What are Food Swamps?

- ▶ Urban environments that contain **few grocery stores**, but contain **several non-nutritious food options** such as fast-food restaurants and gas stations
- ▶ Generally food swamps have a ratio of **3 unhealthy options for 1 healthy option**
- ▶ Food swamps historically have disproportionate health impact on **low-income minorities**



3:1
Ratio

Data Collection



Web Scraping tract-by-tract

Healthy: Grocery Stores,
Supermarkets, etc.

Unhealthy: Convenience Stores,
Fast Food restaurants, etc.

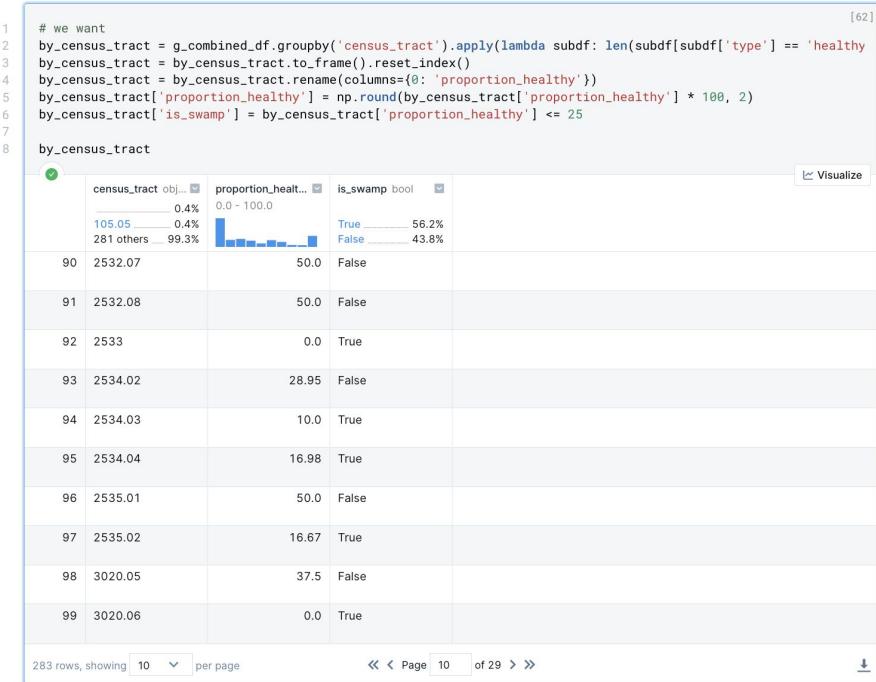
Data Analysis

159

Census Tracts are Food Swamps

56%

of Contra Costa-Solano County
Census Tracts are Food Swamps



```
[66]
# Number of census tracts that are food swamps
num_food_swamps = sum(by_census_tract['is_swamp'])
num_food_swamps
```

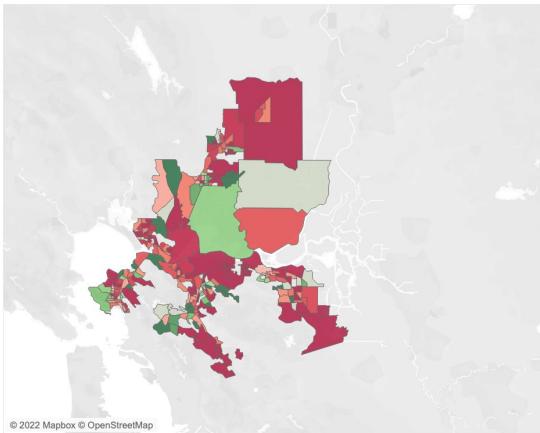
159

```
[67]
# Proportion of food swamps
proportion_food_swamps = num_food_swamps / len(by_census_tract)
proportion_food_swamps
```

0.5618374558303887

Therefore, we can conclude that 56% of the census tracts in Contra Costa-Solano are food swamps.

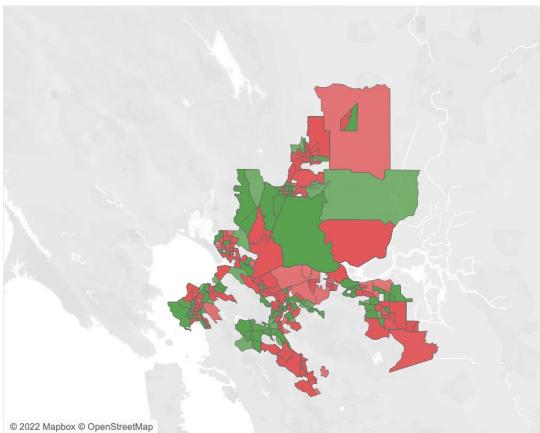
Proportion Healthy



Proportion Healthy
0.0 100.0

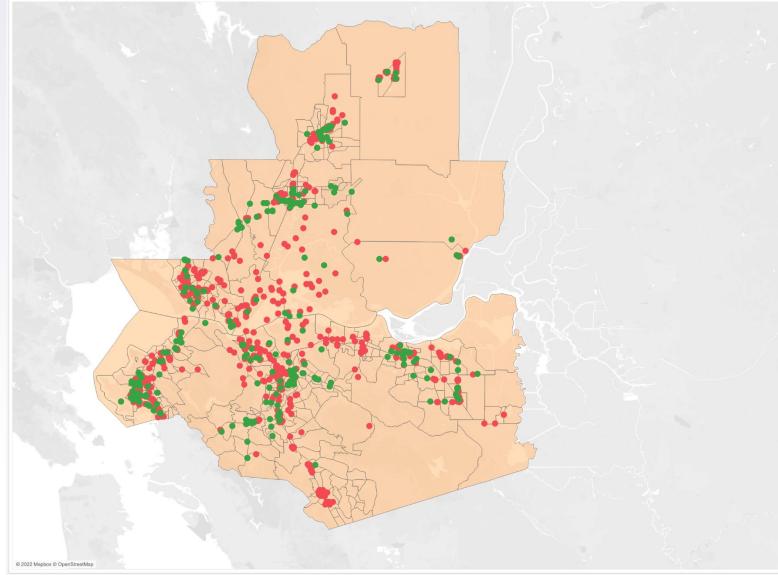
Is Swamp
False
True

Is Swamp



Is Swamp
False
True

Places Datapoints



Type
healthy
unhealthy

69%

of Contra Costa-Solano County
Census Tracts have MORE
unhealthy than healthy options

197, 283

Contra Costa-Solano County
Census Tracts have MORE
unhealthy than healthy options



Insights & Recommendations

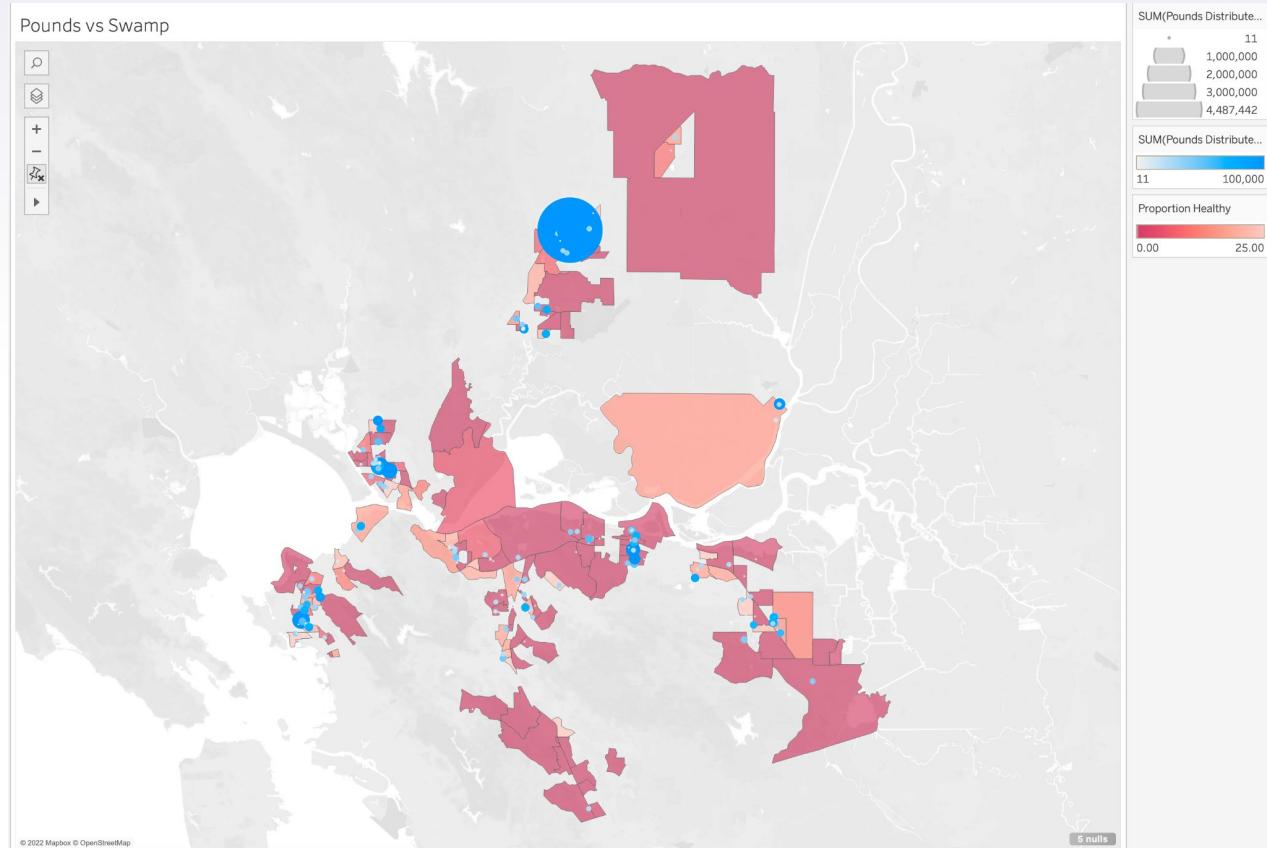
Pounds Distributed & Proportion Healthy & Food Swamps

Areas with:

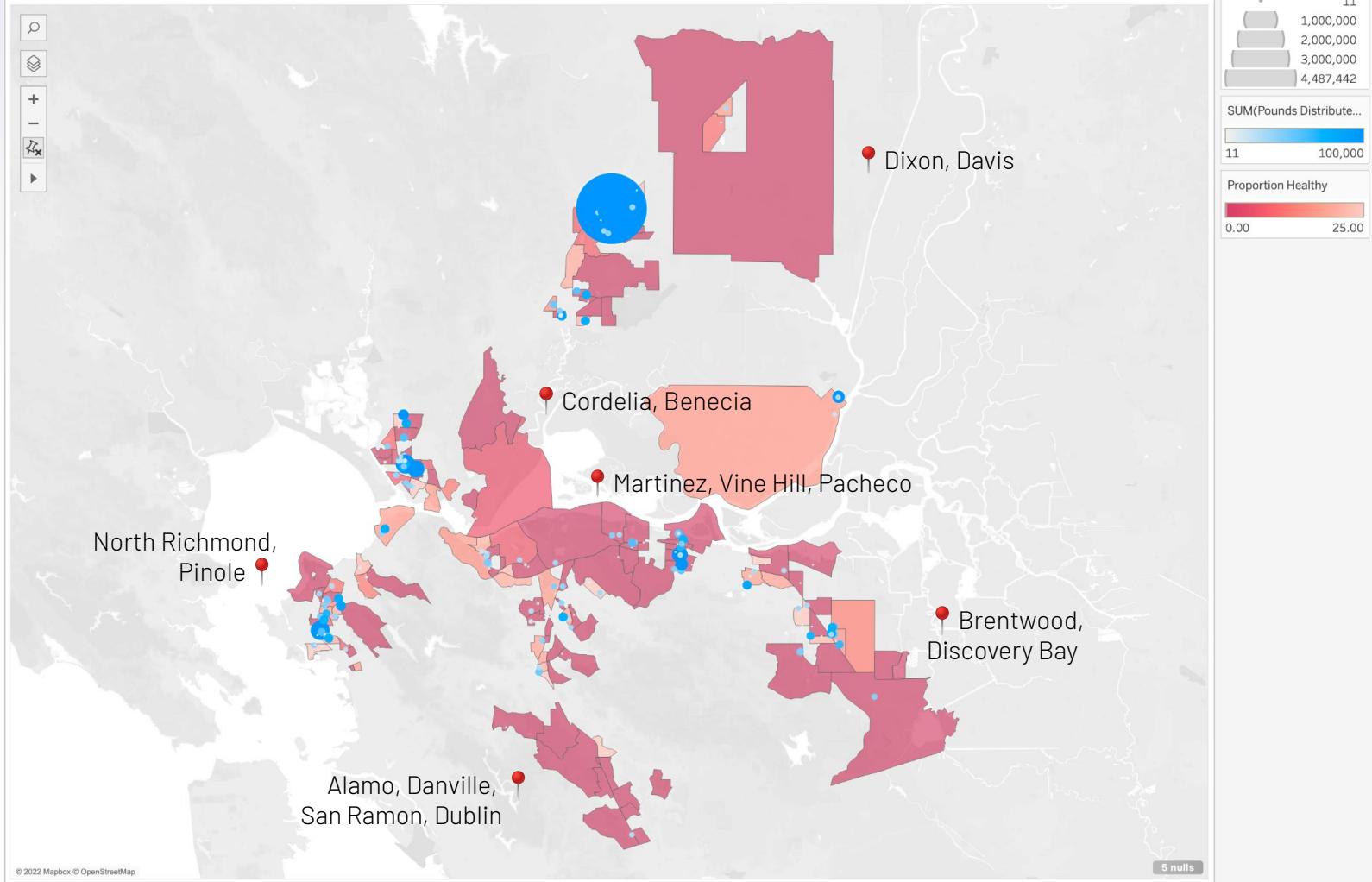
Less pounds
distributed

More unhealthy

Potential areas
that need more
food bank
support.



Pounds vs Swamp

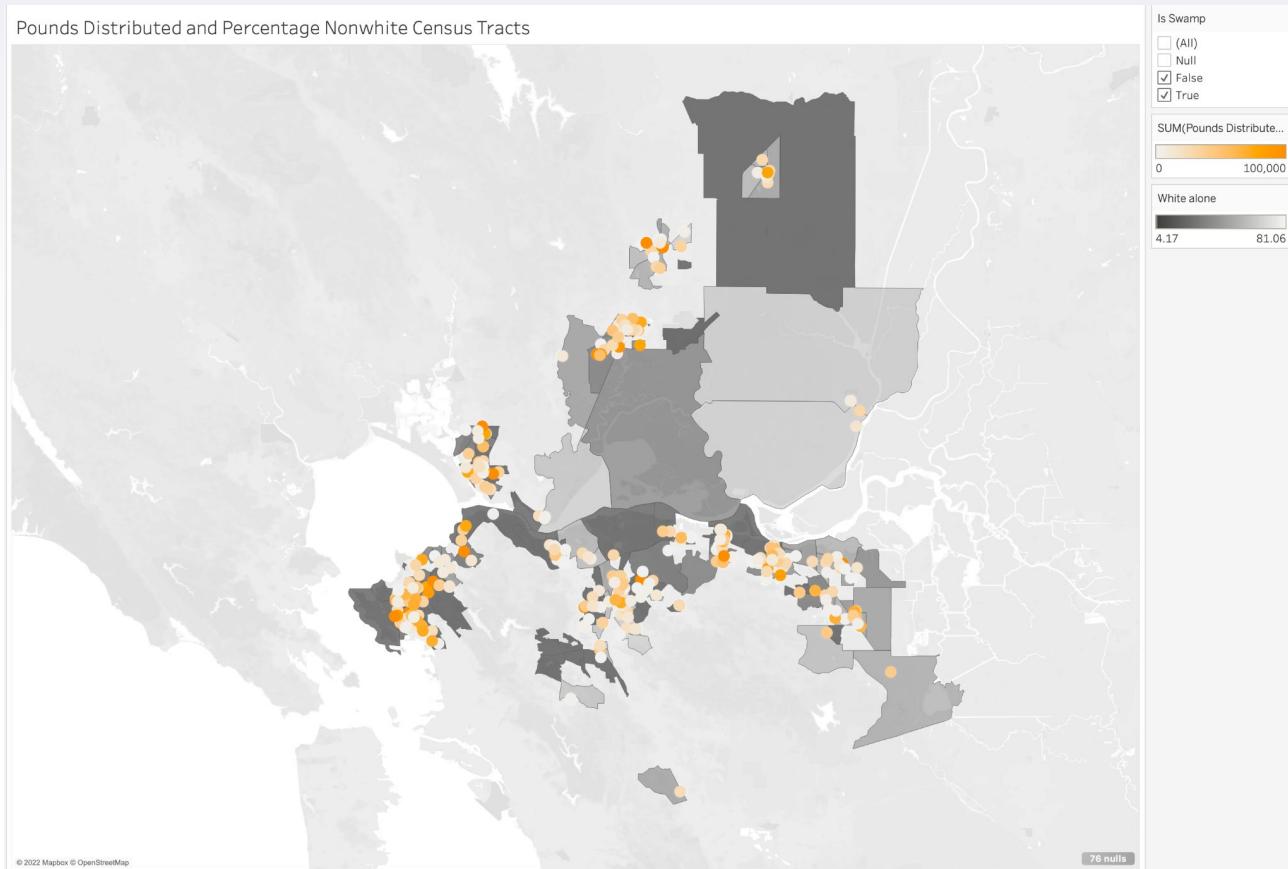


Pounds Distributed & Percentage Nonwhite Census Tracts

Analysis:

On average, more pounds distributed in minority communities

Caveat: % of population minority group <<(much less than) % population white



Pounds Distributed & % Population on Food Stamps & Food Swamp

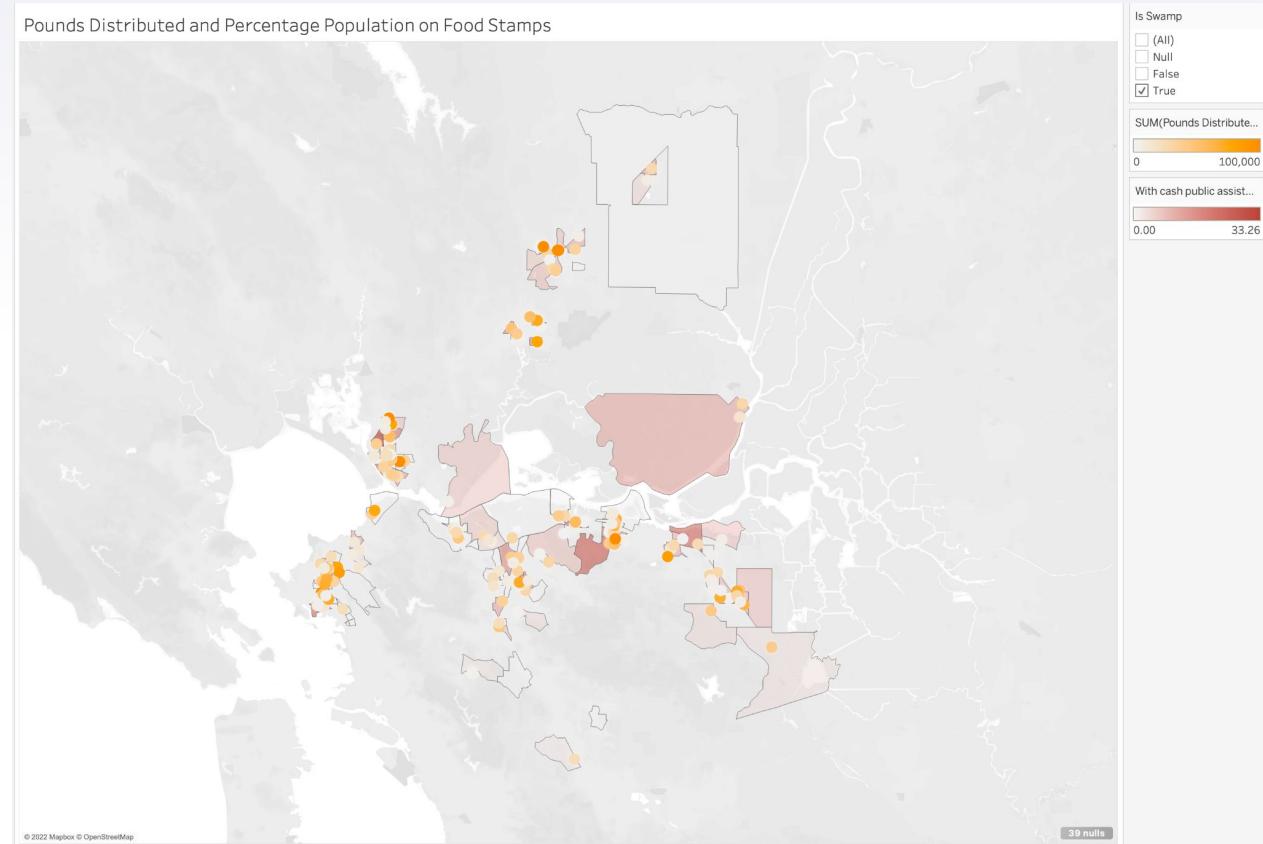
Areas with:

Higher % population
on food stamps

Less pounds
distributed

Is swamp (largely
unhealthy)

Potential areas that
need more food bank
support.



► Ultimately... we recommend

Increasing support in the following cities & areas:

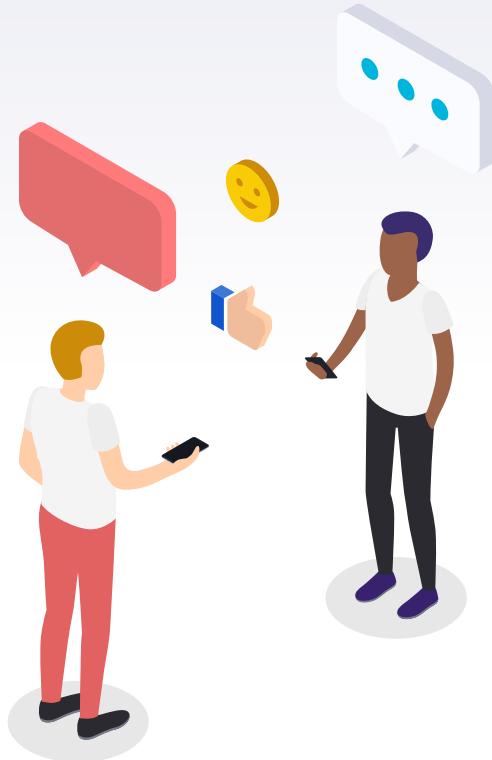
- Alamo, Danville, San Ramon, Dublin
- North Richmond, Pinole
- Cordelia, Benicia
- Martinez, Vine Hill, Pacheco
- Brentwood, Discovery Bay
- Dixon, Davis

And more precisely... census tracts with the aforementioned conditions met

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Challenges & Takeaways

What have we learned?



Challenges

- ▶ Learning new technologies and softwares to fit our technical needs
- ▶ Data collection
- ▶ Combining and synthesizing our tableau worksheets

Takeaways

Tableau

Learning how to work with Tableau and understanding the specifics required to map the data

Process

Throughout the project, it was very important to be in communication between various group pairings

Collaboration

Working as a team to consolidate all the group's individual findings into one final product

THANKS!

Any questions?

