FOOD IN THE DESERT:
THE IMPACT OF THE COMMUNITY FOOD RESOURCE CENTER
Community Food Bank of Southern Arizona in Tucson
Cartography by Rachel Nagin, December 2015

Project Description:
Like in many cities across the US, food insecurity is a major problem in Tucson, AZ. The Community Food Bank of Southern Arizona (CFBSA) works to provide relief and long term solutions for the Tucson community members who struggle to keep food on their plate. The CFBSA launched their School Gardens and Home Gardens programs through the Community Resource Center (CFRC) as a way of promoting long term food security and building food sovereignty. To date, the CFRC has built 15 school gardens, approximately 200 home gardens, and works with 1000 home gardeners across the city. This analysis maps those gardens with Tucson’s grocers, farmers markets, and key demographic data.

Methodology:
I measured the food access by calculating 1/4 and 1/2 mile walking radii around the CFRC home and school gardens (Residential Zone), and Tucson’s Farmers Markets, and Grocery stores (Commercial Zone) as the center points. The Commercial walking buffer zone was joined with the following Census demographic data: race, income level, language, vehicle access, and total housing units. The Residential walking buffer zone was joined with the following demographic data: race, income level, language, vehicle access, total housing units, and students enrolled in each school. Finally, I identified areas not served by CFRC school gardens and farmers markets and provided an analysis of the associated demographic data.

This project could further the available discourse on food deserts. Despite being a relatively new term, the term “food desert” is highly contested. This project uses the USDA, US Treasury, and HHS definition: “a census tract with a substantial share of residents who live in low-income areas that have low levels of access to a grocery store or healthy, affordable food retail outlet.” The definition includes a calculation of transportation options and/or vehicle availability. For this project, vehicle access demographics from the census were used in conjunction with buffer zones based on walking distance. This project primarily seeks to provide the CFRC with maps demonstrating their reach in Tucson and insight into other areas of interest. This project may help provide data that will demonstrate the CFRC’s importance and further their work in the future.

Spatial Questions:
1. Where are the traditionally conceived of/commercial food deserts in relation to CFBSA’s school gardens and home gardens? And who lives in those food deserts?
2. Which populations do CFBSA’s farmers markets and school gardens serve?
3. Where are the under-served, under-resourced neighborhoods that the CFBSA does not yet reach? Who lives there?
4. What areas of Arizona are most vulnerable to environmental disaster-related food insecurity (by mapping drought/water security with state agriculture production)?

Conclusion:
The spatial analysis one very important observation: By a definition of low income and low car access, the parts of Tucson that would be most food insecure are within a ¼ and ½ mile walking distance of a grocer or farmers market. After reviewing vehicle access data covering the 733 block groups between Pima and Pinal Counties, only 28 had a majority of the population without vehicle access. (This is a not surprising result for Tucson, a low density city that lacks a substantial public transit system.) Of the 28 block groups without vehicle access located in Tucson, all are low income areas, predominantly Spanish speaking or mixed language areas, and predominantly Latino or Multi-racial communities.