



MADERA COUNTY DEPARTMENT OF PUBLIC HEALTH

Geographical Assessment and Assets & Risk Factors Mapping Based on Health Inequities

INTRODUCTION

The results from secondary and primary data sources, conducted as part of the Community Health Assessment (CHA), both identified diabetes as a major health concern in Madera County. This was the main reason why diabetes, along with obesity, was chosen by the Live Well Madera County Coalition (LWMC-C) to be one of the four priorities to be addressed in the Community Health Improvement Plan (CHIP).

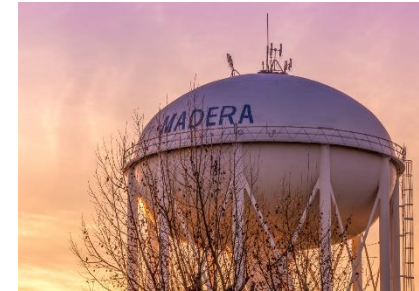
METHODS

An additional analysis of the primary data, consisting of 2,081 electronic and in-person surveys with reported zip code, was conducted to assess for disparities based on geographical locations. Stratification of the question “What are the three biggest health problems in your community?” by zip codes provided information to identify disparity by geographical locations. Stata, Microsoft Excel, and ArcMap were utilized for the analysis and identification of community asset(s). Primary and secondary Geographic Information Mapping (GIS) sources were utilized to identify risk factors and assets around diabetes in Madera County, specifically 93638. Asset factors include parks, farmers markets, WIC clinics, and general grocery stores. Risk factors include fast food, pizza, sandwiches locations, and poverty density (less than 125% FPL).

GIS mapping of parks was completed by the Madera County Department of Public Health. Secondary GIS data around risk factors and additional assets and were obtained from the California Department of Public Health (CDPH)’s Nutrition Education and Obesity Prevention Branch GIS Map Viewer database.

RESULTS OF PRIMARY DATA ANALYSIS AND JUSTIFICATIONS FOR TARGET IDENTIFICATION OF RISK FACTORS AND ASSETS IN 93638

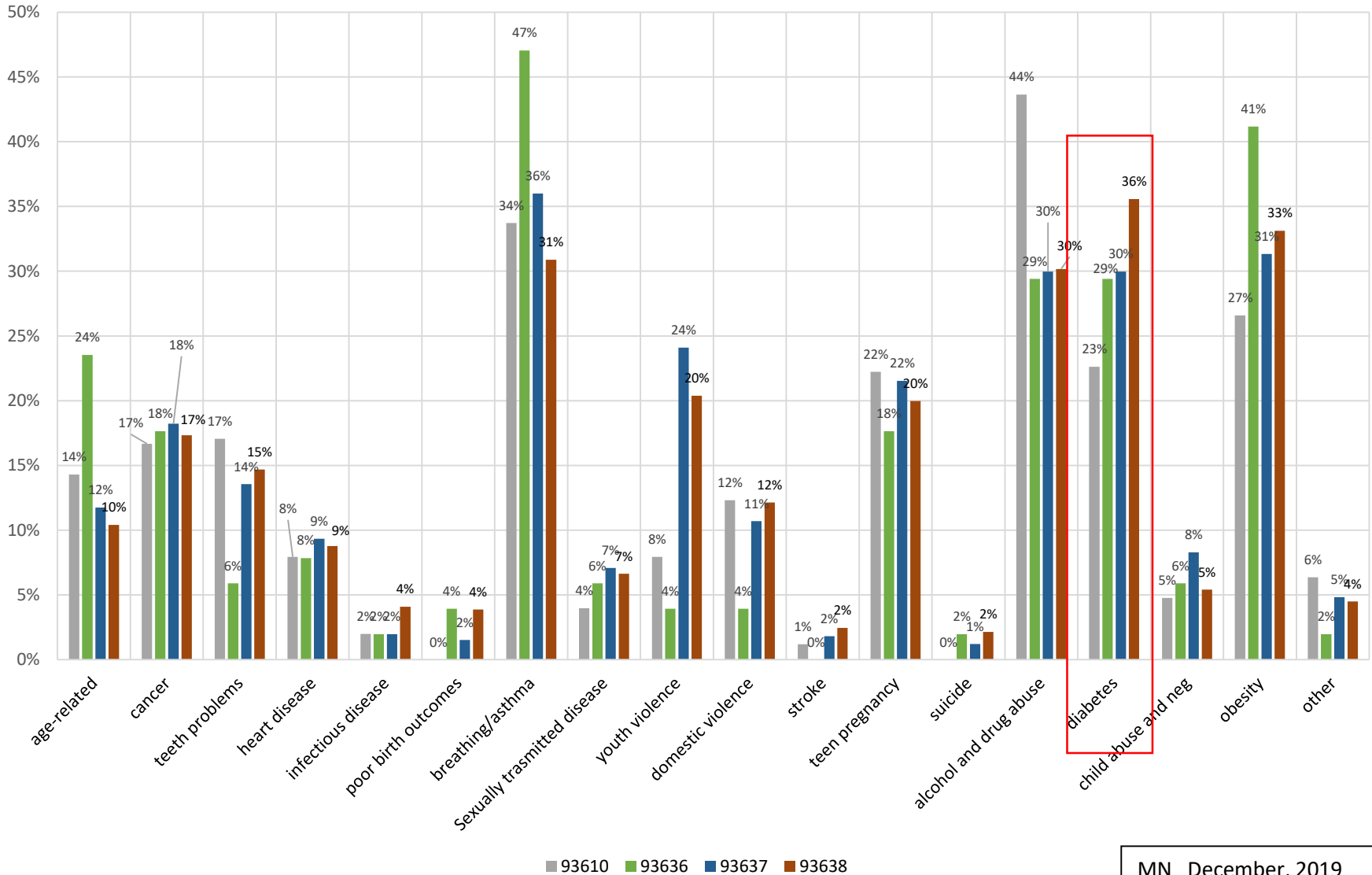
The analysis presented in chart 1 illustrated that there was geographical variation in zip codes around the concern of diabetes in the community. A higher proportion (36%) of responders from 93638 reported diabetes to be one of the three biggest health problems in their community compared to other zip codes such as 93610 (23%), 93636 (29%), and 93637 (30%). Since responders from 93638 comprised of 47.14% of responders, besides proportions, numbers of responder from each major zip codes and their report of biggest health problems were also analyzed in chart 2. This additional observation provided evidence on burden of diabetes. The large disparity was even more apparent as 349 of the responders reported diabetes as one of the three biggest health problems in their community compared to 199 responders for 93637, 15 responders in 93636, and 57 responders in 93610. This indicated that diabetes was ranked the #1 health concern in 93638 by both depictions of count and proportion of responders. The Madera County Department of Public Health is interested in not only the risk factors that might contribute to this disparity, but also the potential assets that can be exploited to mediate diabetes.





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Graph 1: Percent of Reported Biggest Health Problems by Zip Codes

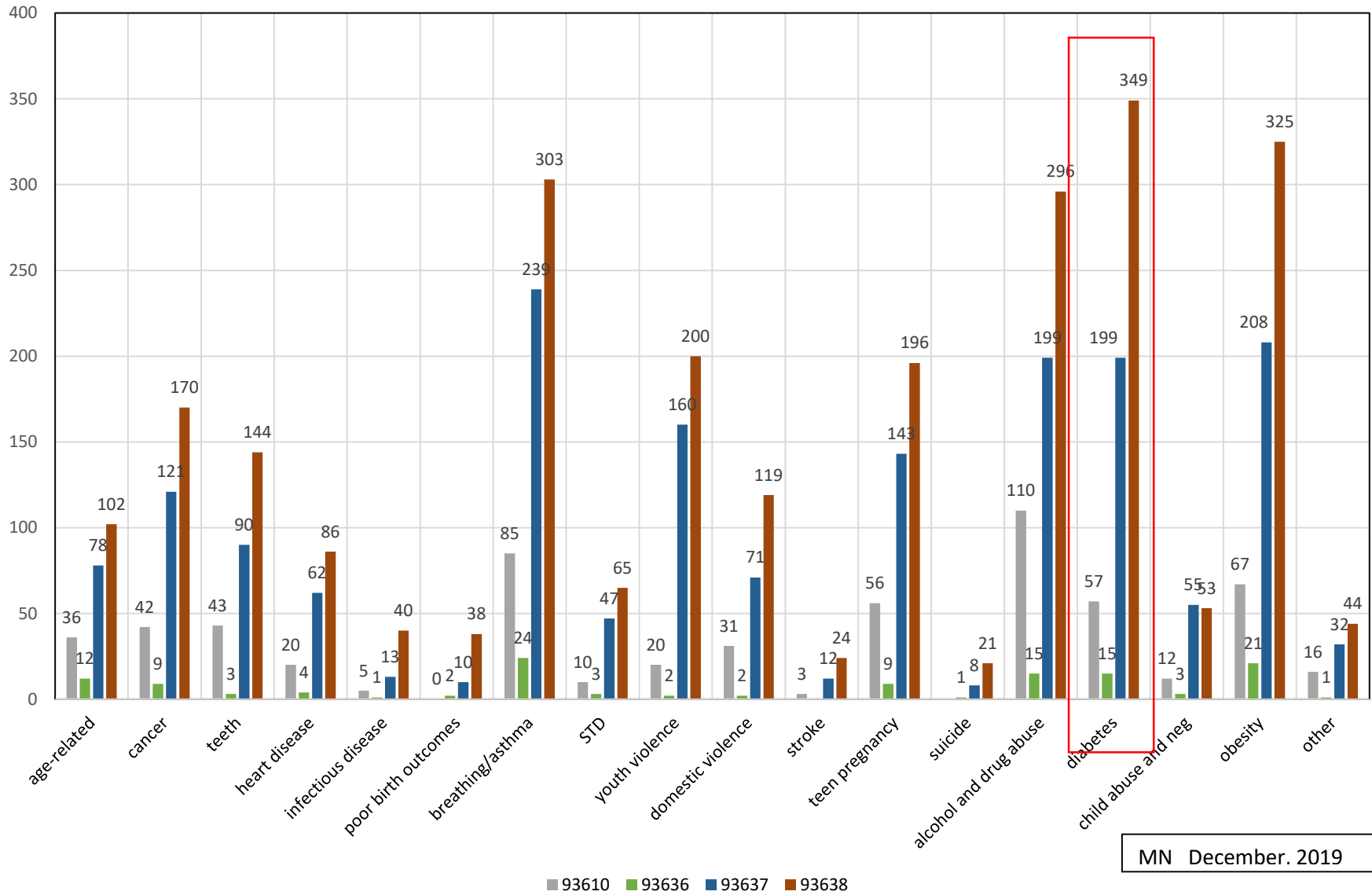


MN December 2019



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Chart 2- Numbers of Reported Biggest Health Problems by Zip Codes



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ASSETS IN

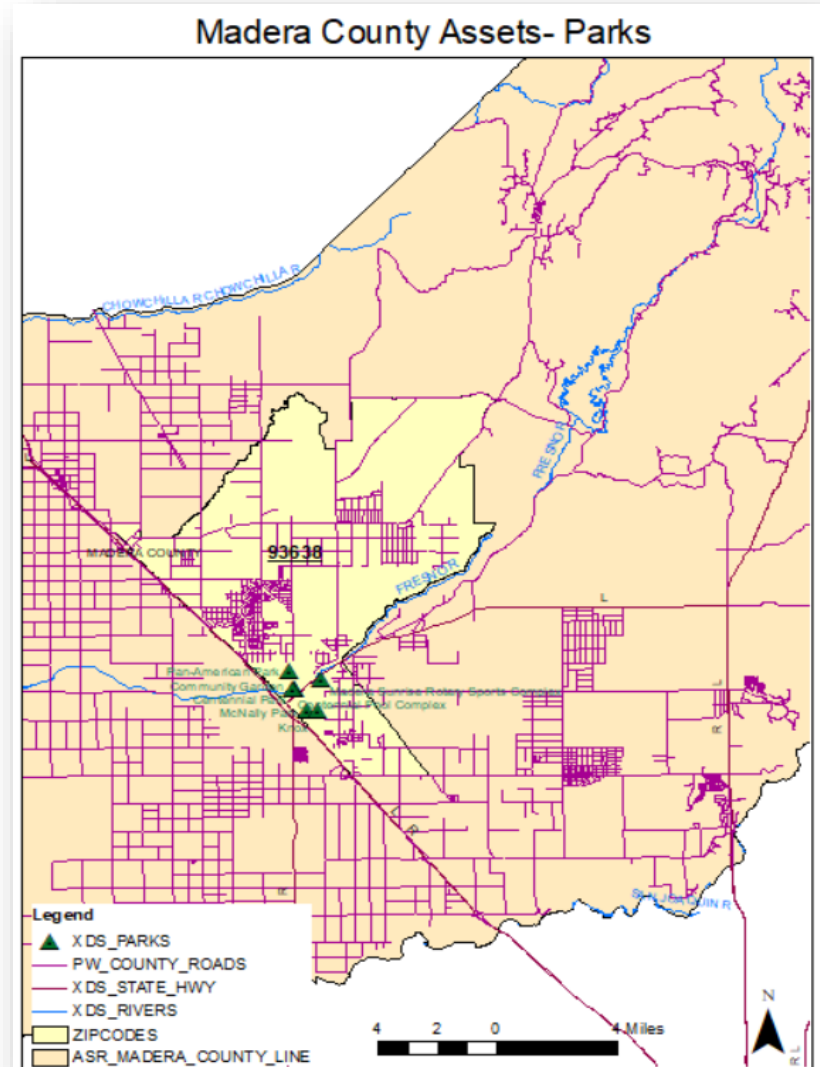
93638

Parks:

Assets in 93638 include community parks. There are a total of six parks located in the target zip code. As demonstrated in figure 1, parks are not equally distributed across the 93638 geographical areas. All parks are concentrated around southern 93638.

Park Name	Address
Pan-American Park	Madera, CA 93638
Community Garden	621 E 4th St, Madera, CA 93638
Centennial Park	221 Flume St, Madera, CA 93638
McNally Park	825 S A St, Madera, CA 93638
Knox Park	Corner of Knox & S. A Street, Madera, CA 93638
Madera Sunrise Rotary Sports Complex	1901 Clinton St, Madera, CA 93638

Figure 1: Parks in Target Zip Code- 93638

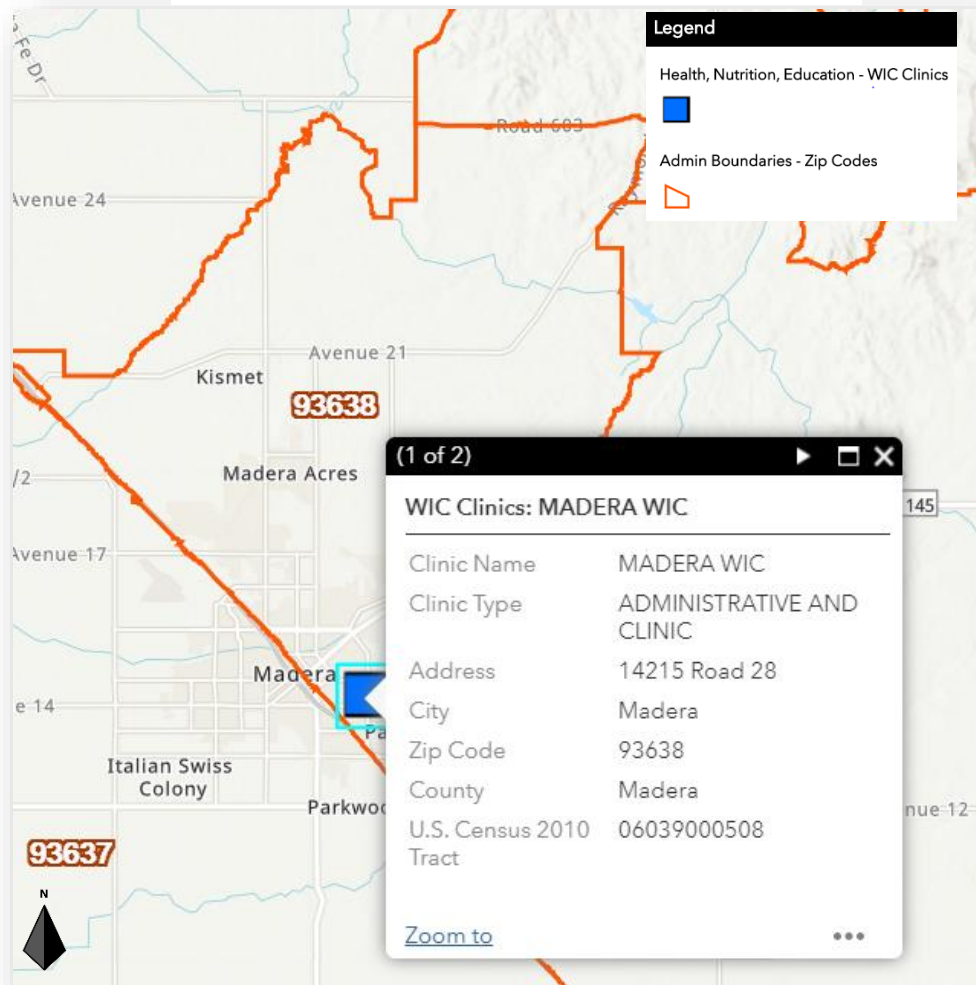




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Figure 2: WIC Clinic in Target Zip Code - 93638

Madera County Assets- WIC Clinic



Women, Infants, Children (WIC) Clinic(s):

There is only one WIC location in 93638. Similar to what was seen with park locations, Madera WIC, which is a program offered at the Madera County Department of Public Health, is located on the southern section of 93638.

Name	Address
WIC Clinic	Old address: 14215 Road 28. Madera, CA 93638 New address: 1604 Sunrise Ave. Madera, CA 93638



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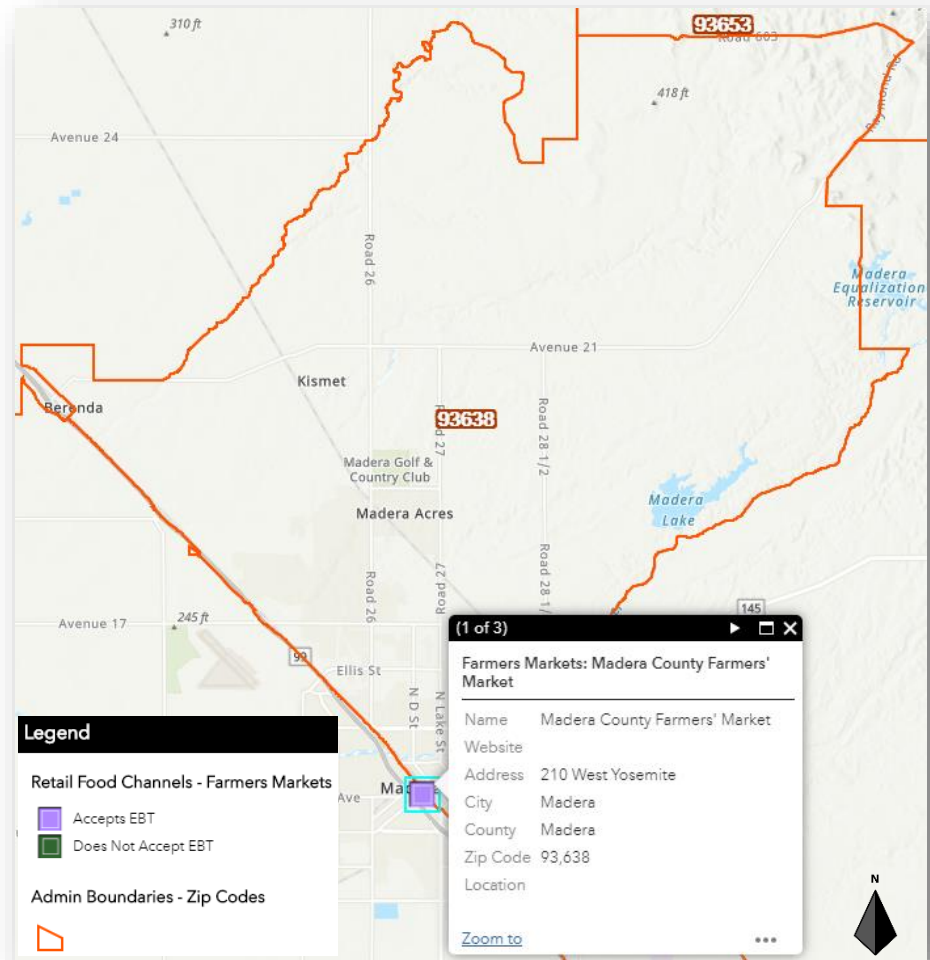
Figure 3: Farmers Market(s) in Target Zip Code - 93638

Madera County Assets- Farmers Market

Farmers Market(s):

There is one farmer market located in 93638. The farmers market is located in the southern part of 93638. This farmers market does accept EBT.

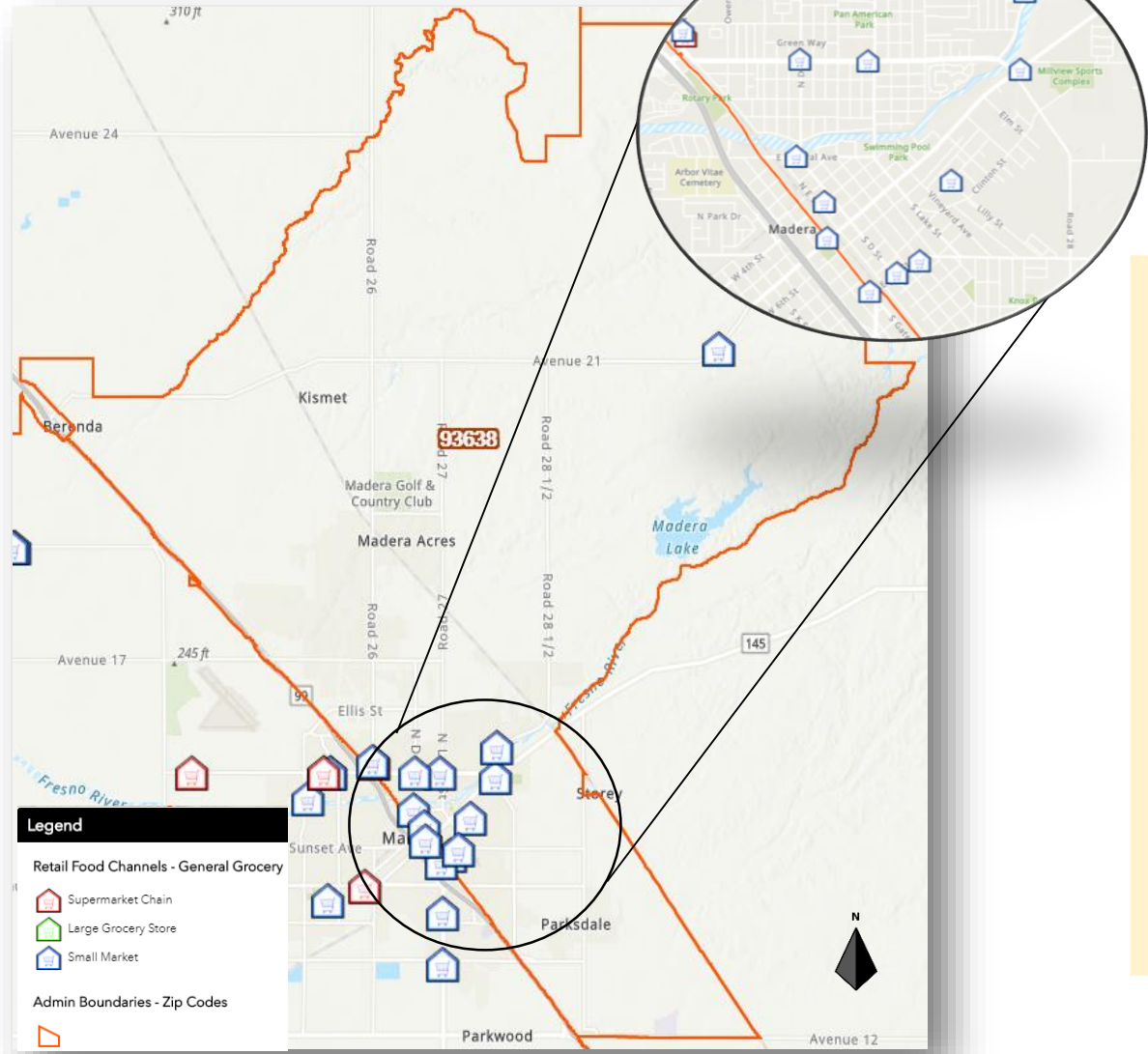
Name	Address
Madera County Farmers Market	210 W Yosemite Ave. Madera, CA 93638





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Figure 4: Grocery Stores in Target Zip Code - 93638
Madera County Assets- Food Stores and Grocery Stores



Grocery Stores:

There are 12 total grocery stores in 93638. 11 of which are considered small grocery markets while one is considered a grocery store chain. Grocery store concentration is in southern part of 93638, bordering 93637. There is one small grocery store on the mid-eastern part of 93638.

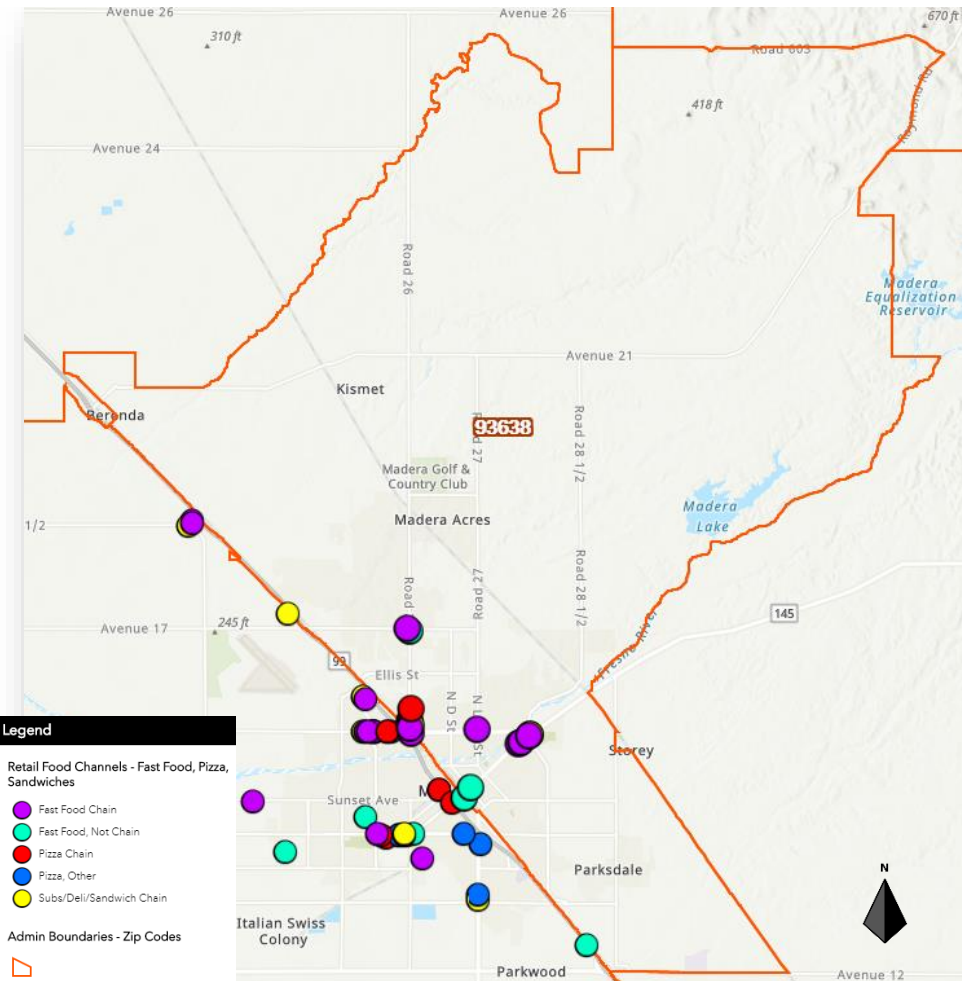
Grocery store names	Address
Delicious food	1454 Segovia Ct. Madera, CA 93638
AM Valero Food Store	1502 E Yosemite Ave. Madera, CA 93638
Washington Market	802 Washington Ave. Madera, CA 93638
M & M Market	500 S B St. Madera, CA 93638
La Esperanza Market	823 E Cleveland Ave. Madera, CA 93638
Del Valle Food	222 E 9 th St. Madera, CA 93638
Food Fair	1100 N D St. Madera, CA 93638
Save Mart	1143 Country Club Dr. Madera, CA 93638
Save N Go	140 E 4 th St. Madera, CA 93638
Migo Market	133 E Central Ave. Madera, CA 93638
Sunny Market and Liquor	21153 Road 600. Madera, CA 93638
Brar Indian Market	1184 County Club Dr. Madera, CA 93638



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Figure 5: Fast Food, Pizza, Sandwiches Shops in Target Zip Code - 93638

Madera County Risk Factors- Fast Food, Pizza, Sandwich Shops



Fast Food, Pizza, Sandwiches Shops:

There are 15 total fast food, pizza, and sandwiches shops in 93638. Seven locations are fast food chains. Three locations are fast food but not chains. Two are fast food pizza chains. One is pizza location but not a chain. Two are subs/deli/sandwich chains.

Fast Food, Pizza, Sandwiches Shops names	Address
Romeo's Pizza & Sandwich shop	1510 E Yosemite Ave #103. Madera, CA 93638
Subway	1510 E Yosemite Ave #101. Madera, CA 93638
Pacifica Pizza	1153 Country Club Dr. Madera, CA 93638
KFC	1144 Country Club Dr. Madera, CA 93638
McDonalds	1406 E Yosemite Ave. Madera, CA 93638
Red Onion Burger	16966 Road 26. Madera, CA 93638
Long John Silver's	1110 Country Club Dr. Madera, CA 93638
Subway	1123 Country Club Dr. Madera, CA 93638
Juan Pollo	25952 Ave 17 Ste A. Madera, CA 93638
Tijuana's Bar and Grill	216 E Yosemite Ave. Madera, CA 93638
Burger King	1103 Country Club Dr. Madera, CA 93638
Taco Casa	1104 N Lake St. Madera, CA 93638
Pizza Hut	1475 Country Club Dr. Madera, CA 93638
Taco Bell	1420 E Yosemite Ave. Madera, CA 93638
Jack in the Box	1545 E Yosemite Ave. Madera, CA 93638



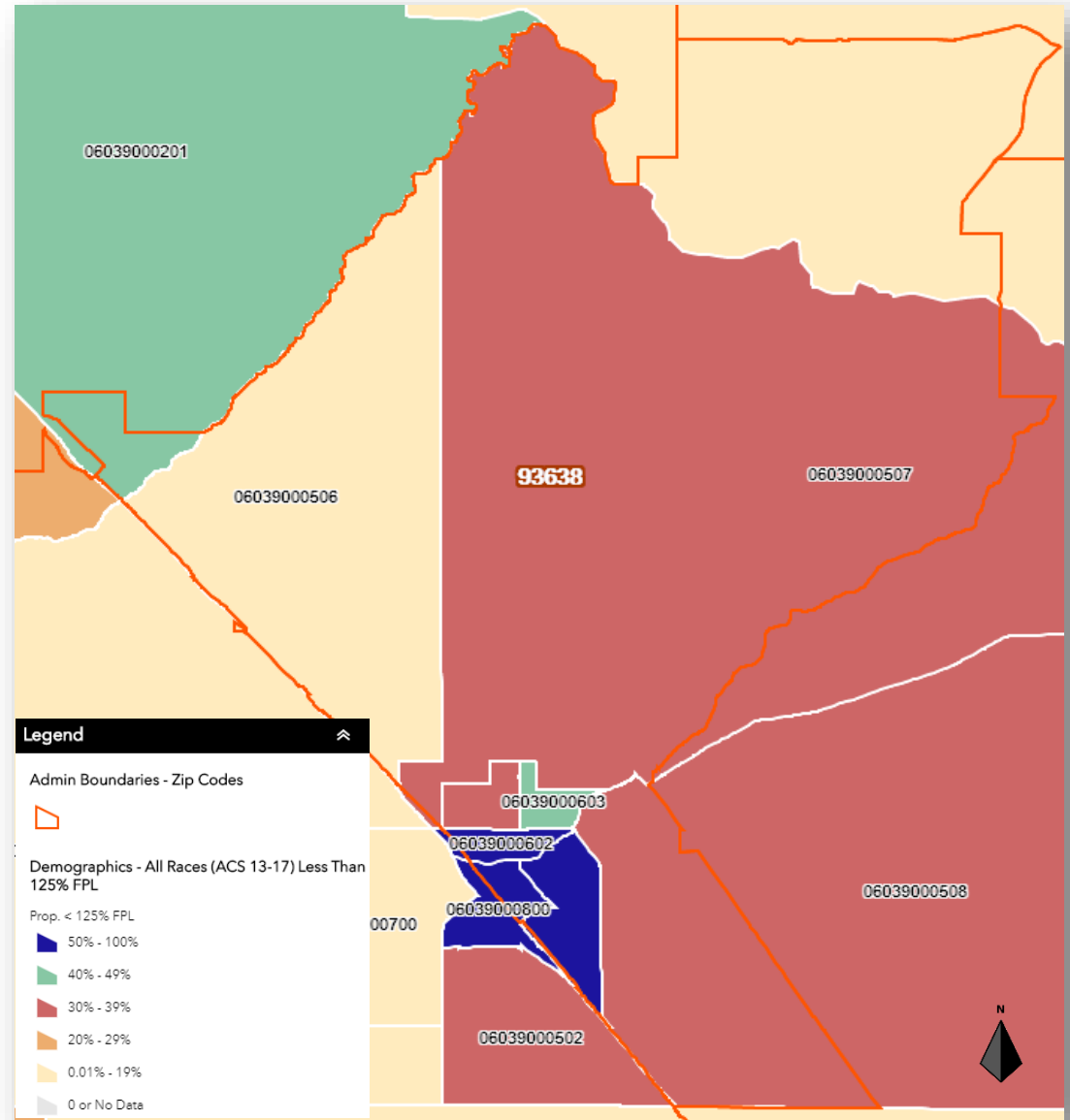
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Figure 6: Poverty in Target Zip Code - 93638

Madera County Risk Factors- Poverty

Poverty (Density of individuals less than 125% under the FPL:

There is a high density of individuals living below the 125% Federal Poverty Line in the southern part of 93638. Specific areas with the greatest impact includes 06039000602 and 06039000800 census tract locations.





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CONCLUSION

Despite having both assets and risk factors, the locations that appeared most impacted are in the southern census tracts of 93638. Poverty is great in this area. Southern 93638 is also the population center, having a high population density compared to the rest of the zip code. Despite having many grocery stores, these stores are often small with some stores clearly being gas stations or convenience stores rather than true grocery stores where fresh fruits and vegetables can be purchased. There is also a large number of fast food chains in this area. In order to mediate diabetes in 93638, additional analysis such as the availability of fresh fruits and vegetables should be conducted. Interventions can include increasing access to fruits and vegetables by expanding farmers market services. Other information that will be useful to compare with reported perceived health problem in the community is diabetes prevalence in 93638. Analysis of the perceived health concern in 93638 with the true burden of disease can confirm or deny diabetes as being one of the biggest health problems in this community.

REFERENCE

Nutrition Education and Obesity Prevention Branch GIS Map Viewer. California Department of Public Health. Obtained at <https://cdphdata.maps.arcgis.com/apps/webappviewer/index.html?id=182f6471d8a147d1a48f3bdfef492bfb>. Retrieved on December, 2019.

Figure 7: Population Centers in Target Zip Code - 93638

