2022

Environmental Justice Existing Conditions Report

City of Chico

5/2022

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Introduction: Environmental Justice & Senate Bill 1000

As established in the 2030 General Plan, the City of Chico envisions a livable, healthy, and sustainable community that offers a high quality of life with a strong sense of community and place. In order to realize this vision, it is important to recognize that the health and opportunity of individuals and communities are shaped by multiple factors, including their environment. In this context, environment doesn't solely mean "nature"—it includes all components of daily life, including the social and built environments.

Environmental Justice consists of the need to promote social equity and community health in policy making and the need to involve affected communities in the decisions that impact their lives to the betterment of conditions for the whole of the population.

Not all people have equal opportunity to live their healthiest lives because of environmental injustices. Certain parts of Chico and those who live there may experience disproportionately higher exposure to pollution, greater health impacts, and less access to the things that keep people happy and healthy, like parks to play in, safe and affordable places to live, good jobs, schools, and stores that meet basic needs.

Environmental justice (EJ) is the field of planning work which relates to addressing these environmental inequities. Senate Bill 1000 (SB 1000), which was passed into law in 2016, requires cities and other local jurisdictions to address environmental justice by developing policies for issues that affect Disadvantaged Communities, which are communities that experience high levels of pollution, socioeconomic stress, historic disinvestment, and negative health outcomes.

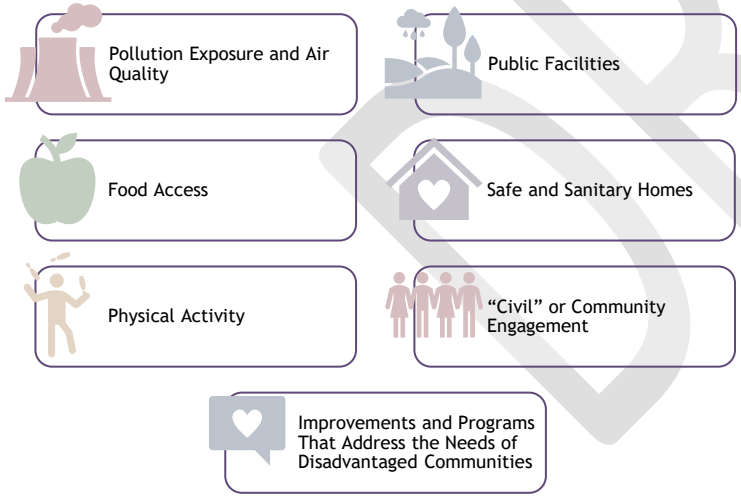

Figure 1 - SB 1000 Topic Areas

Senate Bill 1000 sets out seven topic areas for cities to address directly. Those areas include, Pollution Exposure and Air Quality, Public Facilities, Food Access, Safe and Sanitary Homes, Physical Activity, "Civil" or Community Engagement, and Improvements and Programs That Address the Needs of Disadvantaged Communities (See Figure 1).

Root Causes of Environmental Injustice & The Environmentally Just City

Social Inequities

Differences in power and dominating interests can lead to discrimination, which may be codified in institutions that make policy. Over time, this has led to ingrained, implicit bias despite laws that have banned explicit discrimination in government.

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To address this root cause, policies should reduce differences in power and representation.

Institutional Inequities

Biased policies affect living conditions, including distribution of harms (like polluting facilities) and goods (like jobs, homes located in safe places, parks, etc.)

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Policies that aim to address the unequal distribution of goods and harms can help to improve equity.

Living Conditions

Living conditions, which are influenced by the resources community members can access, interact with our health to affect how long we live and what opportunities we have in life.

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Policies and programs that address immediate environmental effects that people experience can improve people's ability to meet basic needs, and remain healthy and safe.

Differences in Health and Opportunity

The cumulative impacts of policies past and present create differences and disparities in the health of community members and the level of opportunity they experience throughout their lives.

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An environmentally just city seeks to identify, address, and remedy these cumulative effects through an intentional, communinty oriented approach.

Figure 2 - Root Causes of Environmental Injustice

Disadvantaged Communities and Communities of Opportunity

The State of California uses the term "Disadvantaged Community" or "DAC" for short to refer to communities where threshold levels of certain criteria such as pollution burden, income disparity, and education attainment are met. As the Environmental Justice Element for the City of Chico anticipates addressing not only those environmental justice areas subject to the state criteria but also more local and nuanced challenges, the term "Community of Opportunity" will be used to incorporate both the state's "Disadvantaged Communities" and parts of Chico which face heightened environmental challenges of their own.

It should be noted that Communities of Opportunity and the Opportunity Sites identified in the Land Use Element of the General Plan are not the same, though there may be points of overlap.

Justice40, Federal Climate and Economic Justice Planning

Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad* has resulted in the creation of a Federal-level Environmental Justice Screening Tool which seeks to identify disadvantaged communities that are marginalized, underserved, and overburdened by pollution – all criteria which are identified as important in SB 1000 and this planning process for the City of Chico. While the Justice40 tool is not officially released, early versions of its methodology have identified several disadvantaged communities in Chico.

This initiative is included in this report as the purpose of the Justice40 tool is to direct 40% of the overall Federal investments in seven key areas to disadvantaged communities. These areas are climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, the remediation and reduction of legacy pollution, and the development of critical clean water infrastructure. These topic areas and equity goals are aligned with City goals related to climate adaptation, climate action, and environmental justice and the progress of Justice40 should be monitored to secure project funding when applicable.

Purpose

This Existing Conditions Report takes a deeper look at different environmental justice issues that impact both the entire city and the Communities of Opportunity which are more vulnerable. Environmental justice is a complex, multifaceted topic. The existing conditions report provides a summary of some issues but is not intended to be a complete or definitive resource.

Existing Conditions Reporting Methodology

This report primarily utilizes data collected at the census tract level. A census tract is a geographic boundary that is usually either the smallest or most complete geographic scale for which data is available. Each tract has an average population of 4,000 residents, though it can range from 1,200 to 8,000 people. Census tract boundaries and neighborhood boundaries are not the same—while a neighborhood may fall in the boundaries of a single census tract, others may overlap multiple tracts.

To establish a baseline understanding of the conditions which exist in Chico relative to its surroundings, staff utilized the CalEnviroScreen tool to identify certain census tracts which met criteria established by City Staff as Communities of Opportunity.

The City recognizes that some census tracts contain vastly different environmental conditions in different regions. To address these shortcomings inherent to the data sources available from State and Federal sources, staff have held stakeholder meetings with several community groups and organizations to better understand the environmental conditions present within the Chico community. To supplement the findings of the CalEnviroScreen tool and ground the planning process in local knowledge and experience, staff have broken down the process to correspond to the seven environmental justice planning topics. Using spatial analyses alongside the GIS department, staff have worked to develop a Chico-centered understanding of environmental justice in the City by using local metrics such as distance from grocery stores, proximity to high-volume roadways, and the prevalence of parks and walking paths in neighborhoods.

The preliminary results of these analyses will be shared with other City Departments, community members, and stakeholder organizations to garner their feedback and augment staff's understanding of the environmental conditions residents experience daily. These conversations, combined with the spatial analysis performed by staff, will guide the City towards compliance with the seventh category of Senate Bill 1000: Improvements and Programs That Address the Needs of Disadvantaged Communities.

Moving forward, a version of this report will be used as the baseline to formulate Goals, Policies, and Actions which will comprise the Environmental Justice Element in the City of Chico General Plan. Opportunities for community member engagement with this part of the process will be forthcoming. To remain involved with the process, subscribe to our mailing list, or track progress and review documents posted to our webpage: https://chico.ca.us/environmental-justice

Establishing Peer Cities:

To help frame conditions in Chico in reference to other jurisdictions through the State of California and the greater western region, staff identified several communities that for the purpose of this report are considered Chico's peer cities. The purpose of this method of analysis is twofold. The first benefit is to identify places where Chico could benefit from solutions or beneficial planning approaches to inform policy and planning decisions. The second is to establish a more nuanced understanding of environmental justice issues across the region in cities and places which more closely match Chico than a state- or county-wide average, in effect controlling for issues which may reach beyond a local jurisdictional scope and assessing how each city is faring relative to each other.

The identified peer cities for the purpose of this report are as follows:

- Davis, CA – population 66,850
- Eugene, OR – population 176,654
- Redding, CA – population 93,611[1]

Identifying Communities of Opportunity in Chico

An essential component of planning for environmental justice is the designation of Communities of Opportunity. Many state and federal agencies utilize different metrics for determining which communities (often census tracts) ought to be considered as "disadvantaged" or when conditions present an opportunity for improvement. Within SB 1000, there are several methods available for identifying disadvantaged communities.

The first of these is CalEnviroScreen, a screening tool developed by the California Office of Environmental Health Hazard Assessment, used to help identify communities disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution. This score compiles pollution indicators related to ozone, particulate matter, drinking water, lead, pesticides, toxic releases, traffic, EPA cleanup sites, groundwater threats, proximity to hazardous waste, impaired water bodies, and solid waste sites; as well as population characteristics which increase vulnerability such as asthma rates, the prevalence of low birth weights, the rate of cardiovascular disease, education attainment, linguistic isolation, poverty rates, unemployment levels, and the rate of housing burden.

[1] Census.gov, 2020

A stock interpretation of CalEnviroScreen (at right), which compares pollution across the state level highlights Census Tract 13, or the Chapman and Mulberry Neighborhoods as experiencing environmental burden in the above the 75th percentile with Tract 10 (Downtown and surrounding neighborhoods) scoring just on the other side of the cutoff in the 69th percentile.

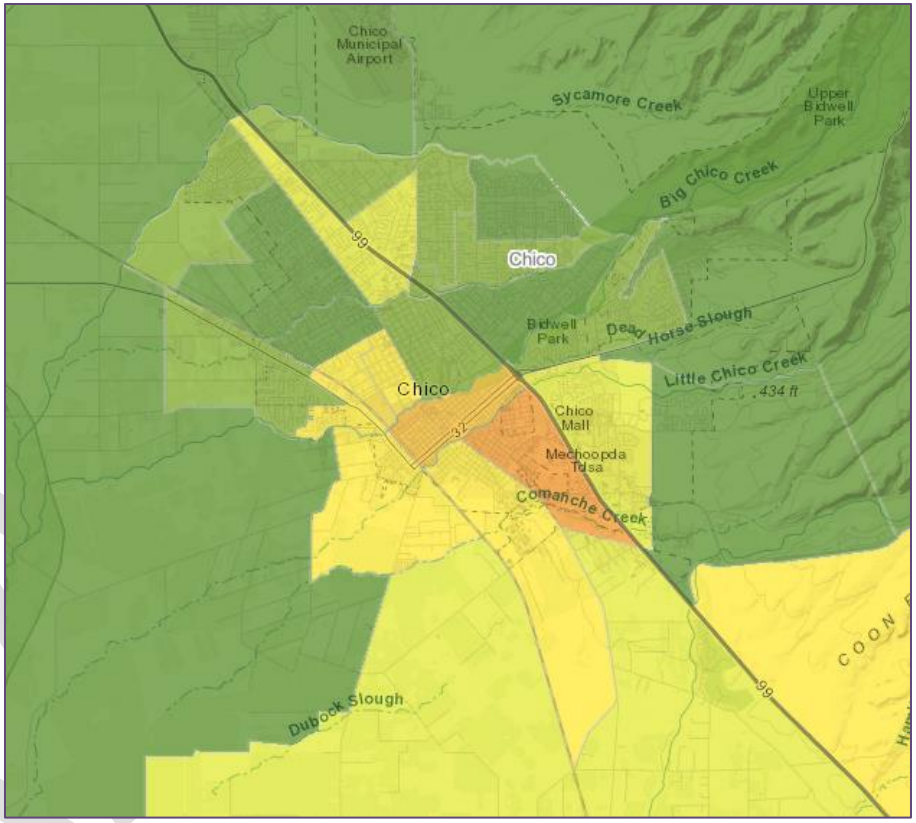


Figure 3 - CalEnviroScreen 4.0 Results

To best contextualize conditions within Chico relative to the nearby communities within Butte County, these metrics were reorganized to compare conditions in Chico relative to the rest of Butte County. As such, the map on the following page (Figure 4) represents a composite of CalEnviroScreen 4.0 scores which have been scored relative to other census tracts in Butte County with the highest 25% highlighted as being relatively more burdened by the combined impacts of environmental pollution and social vulnerability.

In addition to pollution burden, low-income residents are likely to experience heightened vulnerability to other environmental challenges such as food access, housing quality, and transportation challenges. The following report details these challenges with greater scrutiny and the map on page 11 (Figure 5) establishes which census tracts within Chico are considered low-income, or where the median income is less than 80% of the statewide median income (effectively the lowest earning 20% of households in the state).

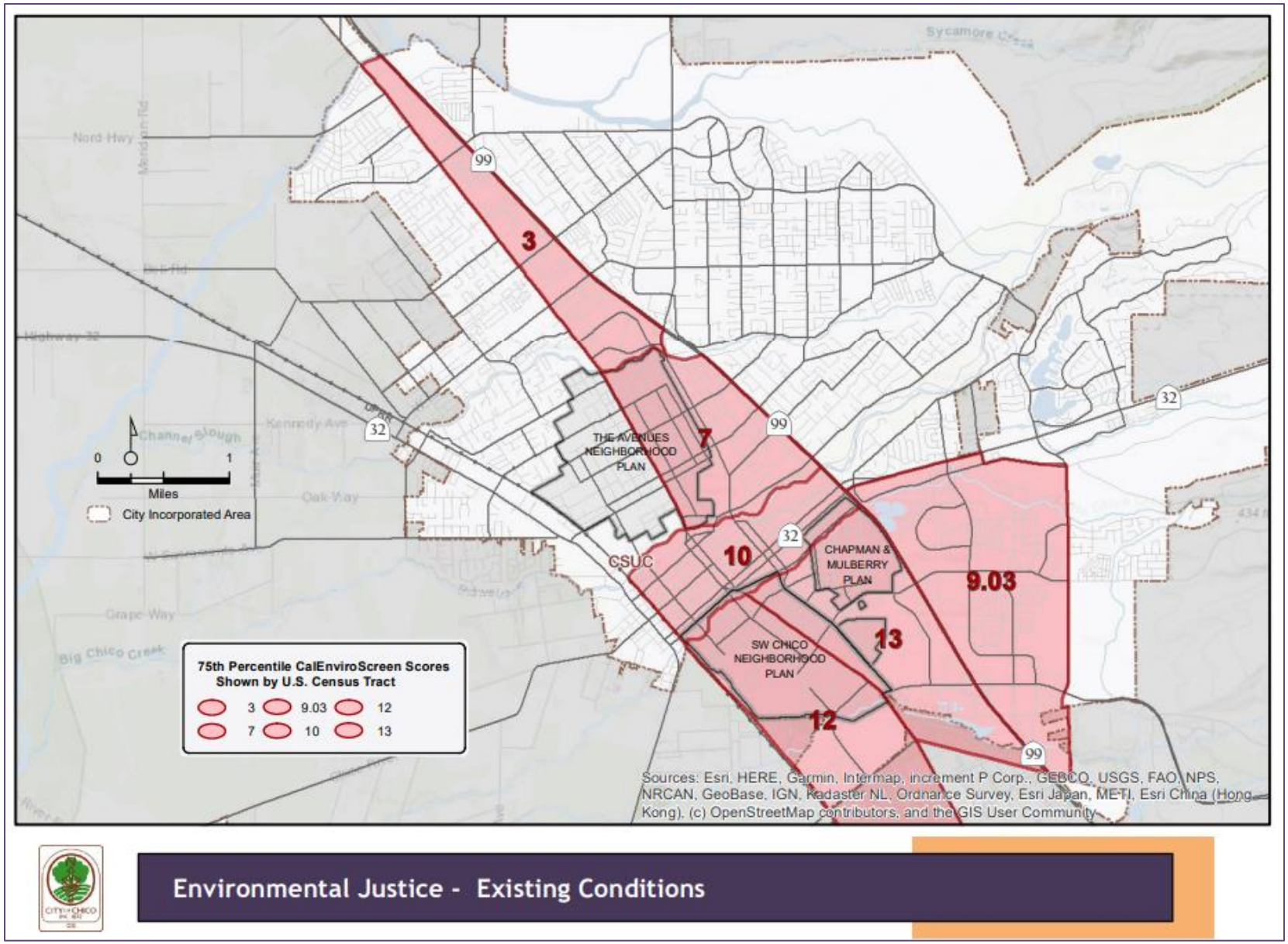


Figure 4 - Butte County Localized CalEnviroScreen

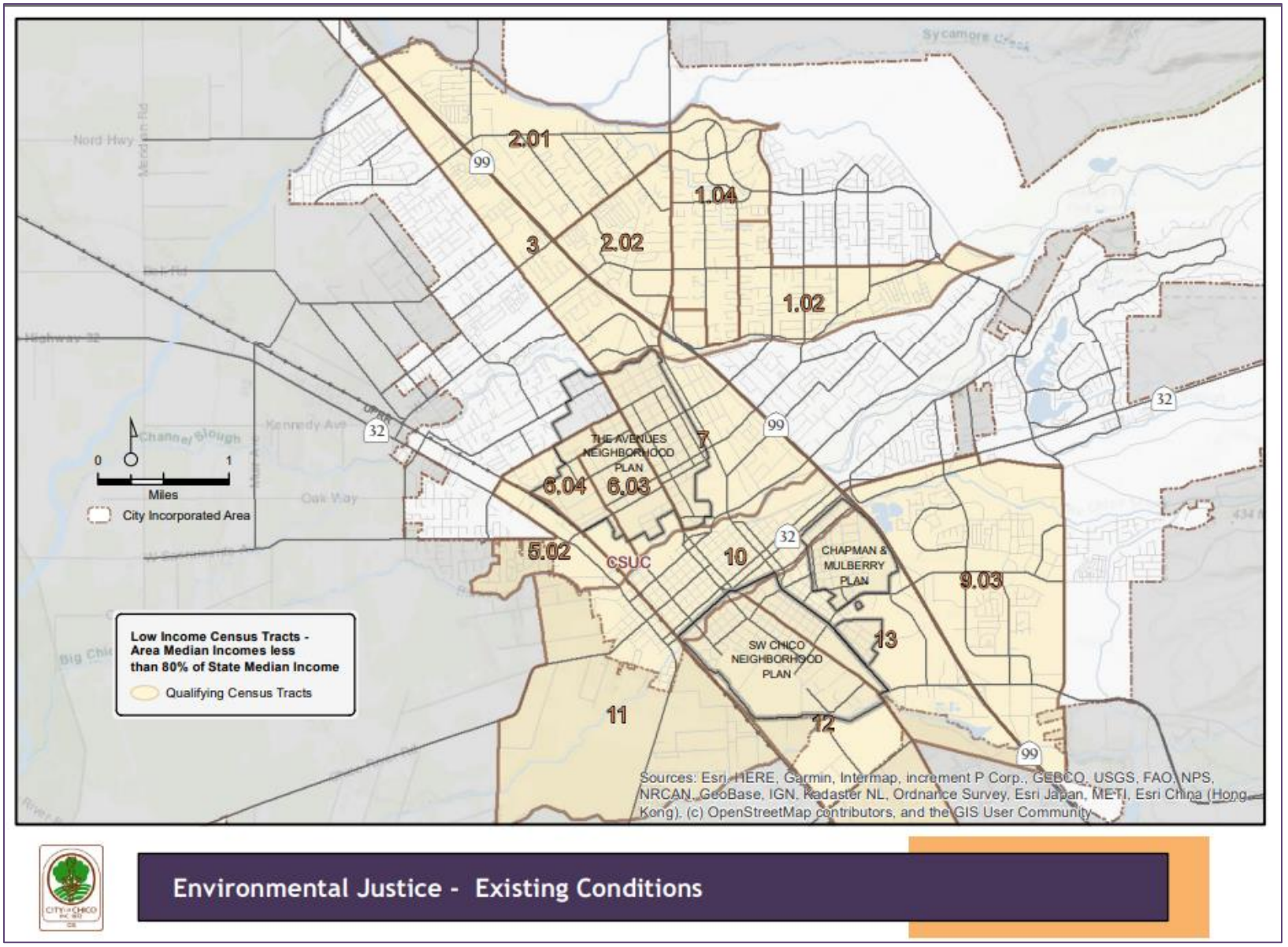
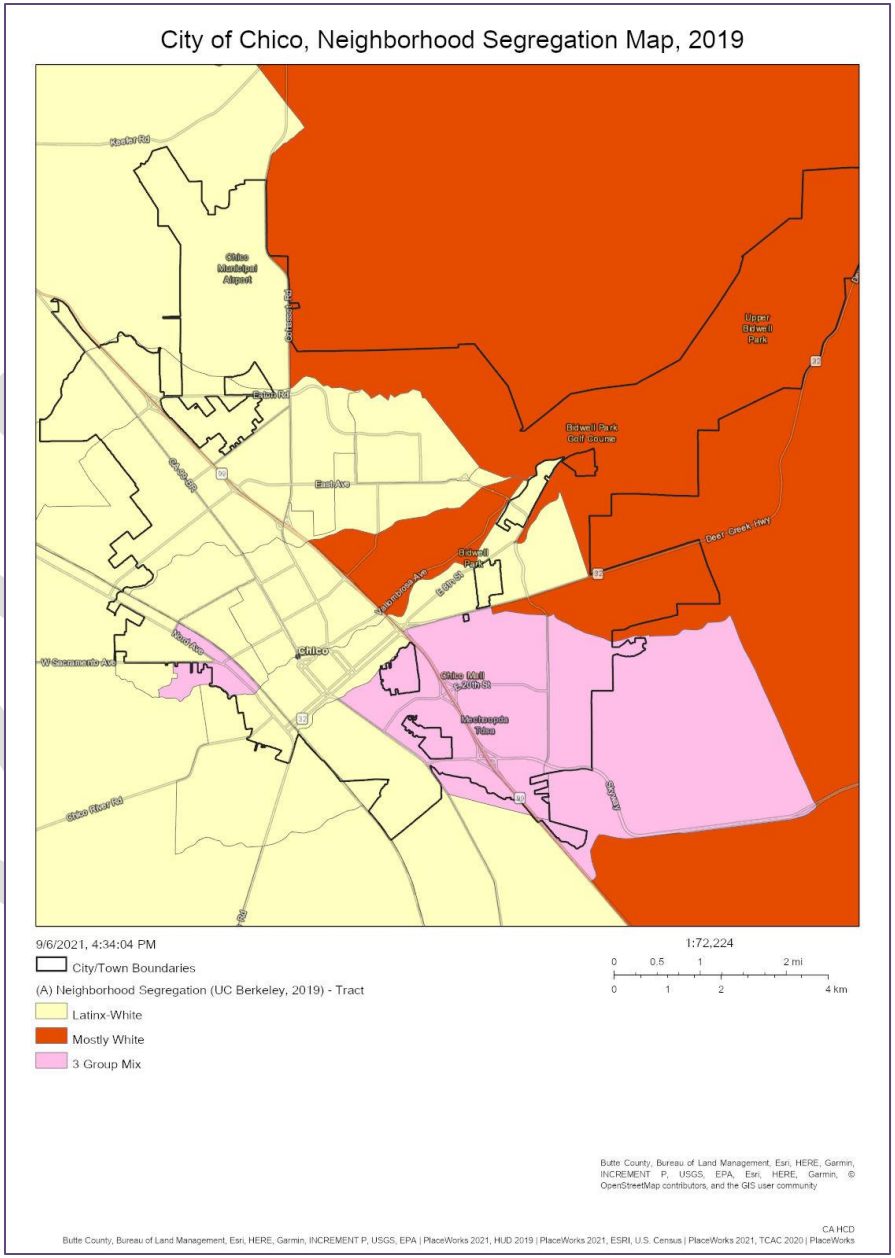


Figure 5 - Low Income Census Tracts

In addition to income, the racial composition of disadvantaged communities is a common data point used when discussing which populations are most impacted by environmental injustices within a community. The neighborhood segregation map at right identifies which racial and ethnic groups have more than 10% representation within a given census tract in 2019.

Portions of east Chico and the majority of west Chico is identified as “Latino-White.” The map uses the term “Latinx” which is a gender-neutral term for people of Central and Latin American descent. Portions of west Chico near North Avenue and W. Sacramento Avenue are identified as “3 Group Mix”, which means the census tracts have more than 10% representation of three racial and ethnic groups. Much of southeast Chico and southcentral Chico is also identified as “3 Group Mix”

Figure 6 - Neighborhood Segregation



Pollution Exposure & Air Quality

Pollution exposure occurs daily in virtually every community when people come into direct contact with air, food, water, and soil contaminants—Chico is no exception. These exposures are often the result of the proximity of people to incompatible land use, polluting facilities, heavily traveled roads, or other sources of exposure. Exposure to pollution can cause or worsen negative health outcomes and make people too sick to work, go to school, or even go outside. Poor air quality can lead to an increase in school absences, medication use, doctors' visits, and the number of hospital admissions. A livable, healthy Chico means a physical environment that supports everyone's good health and quality of life.

Aggregate Pollution Burden

To establish a baseline for pollution exposure within Chico's communities, the CalEnviroScreen resource was reconfigured to evaluate census tracts in Chico relative to the census tracts which comprise Butte County. By utilizing the Pollution Burden Score calculated for each census tract, the map below (Figure 7) shows the distribution of pollution burden across the City. Green shaded areas experience less cumulative pollutions burden than the yellow, orange, and red areas.

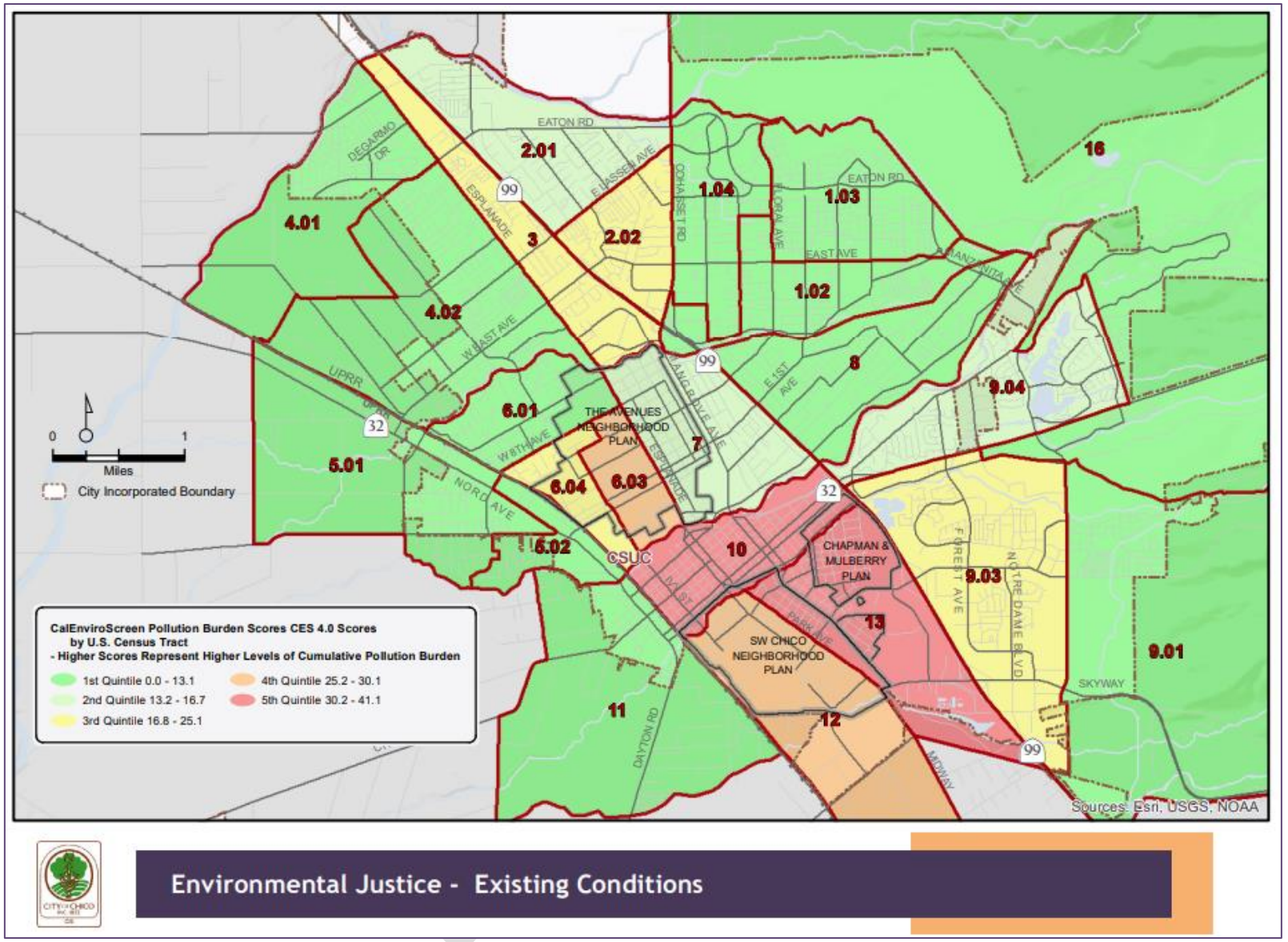


Figure 7 - Pollution Burden Scores

Water Quality

Water for residential and commercial use in Chico is provided by the California Water Service who operate 57 wells throughout the Chico District to provide water to residents and businesses. As of 2020, the water in Chico met all primary and secondary federal and state water quality standards[2]. This means that the water being delivered to homes and businesses is of an acceptable quality, however contaminants may be present in residential or commercial plumbing such as lead solder in older systems. For further discussion of this aspect of pollution exposure, see the Safe & Healthy Homes section of this report.

Air Quality

Air quality in Chico falls under the monitoring authority of the Butte County Air Quality Management District (BCAQMD), which operates monitoring equipment in locations around the County, including stations in Chico and Paradise. In 2020, BCAQMD reported on two criteria pollutants of greatest concern – ozone (O_3) and particulate matter ($PM_{2.5}$ and PM_{10}).

Ozone is the primary constituent of urban smog, a colorless gas which forms most readily when stagnant air, warm temperatures, and cloudless skies occur simultaneously. This makes summer the peak season for ozone pollution in Butte County. In 2018, the US EPA designated nonattainment for the 2015 federal ozone standard. The US EPA projects Butte County to attain the 2015 standard by 2025 with the current emissions trends as of reporting. The monitoring station in Chico exceeded the federal standard one (1) time in 2020 and preliminary analysis by BCAQMD indicates that the exceedance occurred during a period of wildfire impacts.

Particulate matter ($PM_{2.5}$ and PM_{10}) refer to particles with aerodynamic diameters of 2.5 and 10 microns, respectively. For reference, a human hair has an average diameter of around 70 microns. These fine particles pose an increased health risk because they can deposit deep in the lung and may contain substances that are particularly harmful to human health.

In Butte County, attainment has been reached for federal PM standards, though during fire season there are frequently days when the standard is exceeded. In 2020, the Chico monitoring station recorded 33 days above the federal standard for $PM_{2.5}$ and 8 days above the federal standard for PM_{10}. With few exceptions, all exceedances occurred during the wildfire season.[3]

Internal air quality, or the presence of indoor air pollutants is not monitored by BCAQMD but does play a role in public health. Indoor air pollution ranks among the top five environmental health risks. For further discussion of this topic, see the Safe and Healthy Homes section of this report.

Transportation represents one of the most polluting land uses in Chico, particularly along high-volume roadways and in areas where diesel-burning vehicles are used more frequently. While air pollution is not a geographically isolated phenomenon,

[2] California Water Service, 2020
[3] Butte County Air Quality Management District, 2021.

residential areas near high volume roadways will be exposed to substantially higher levels of roadway pollution than areas which are more isolated from transportation uses.

The map at on the following page (Figure 8) shows the highest volume roadways in Chico as observed in the 2019 Average Daily Trips survey. Blue flags indicate monitored intersections, and the shaded areas represent residential parcels which most directly front these roadways. Of note is the rate at which multifamily developments are exposed to high volume roadways when compared to single family residences.

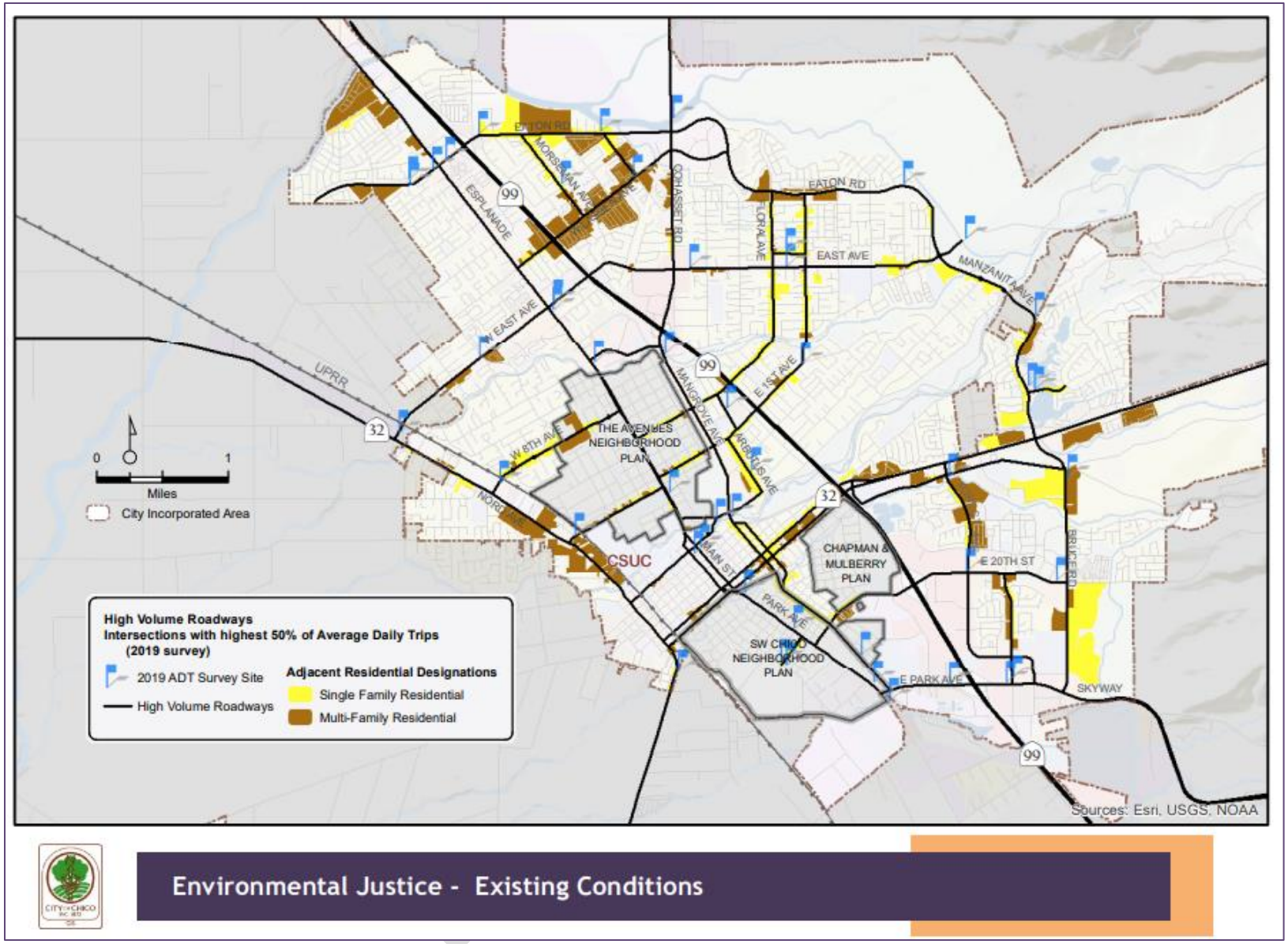


Figure 8 - Residential Proximity to High Volume Roadways

Community Facilities & Physical Activity

In coordination with Butte County and the Chico Area Recreation & Park District, the City of Chico provides or helps to fund a variety of public facilities such as libraries, parks, community centers, and infrastructure like sidewalks, streetlights, bike lanes, and bathrooms, to help people meet their daily needs. However, not every neighborhood has the same access to high-quality facilities and programs. Lack of access to these facilities and infrastructure can keep people from being their healthiest and decrease quality of life, especially for people who cannot afford the extra costs of private facilities.

Parks, Schools, and Community Centers

The Trust for Public Land is a nonprofit organization dedicated to creating parks and ensuring healthy, livable communities for generations to come. As a tool in their work, they maintain the Parkscore index, one element of which is a calculation of the percent of a city's population who lives within a 10-minute walk of a park. Access to parks plays a substantial role in the level of physical activity in a community, particularly for children and the elderly. The level of physical activity in communities is measured by the US Census and the American Community Survey.

While Chico falls below the average amongst peer cities in terms of park access, the level of physical activity does not suffer accordingly. This is likely due to the overwhelmingly hospitable climate Chico presently enjoys year-round, as well as the allure of relatively few, yet high quality parks such as Bidwell Park which draws significant visitors from outside the 10-minute walking radius.

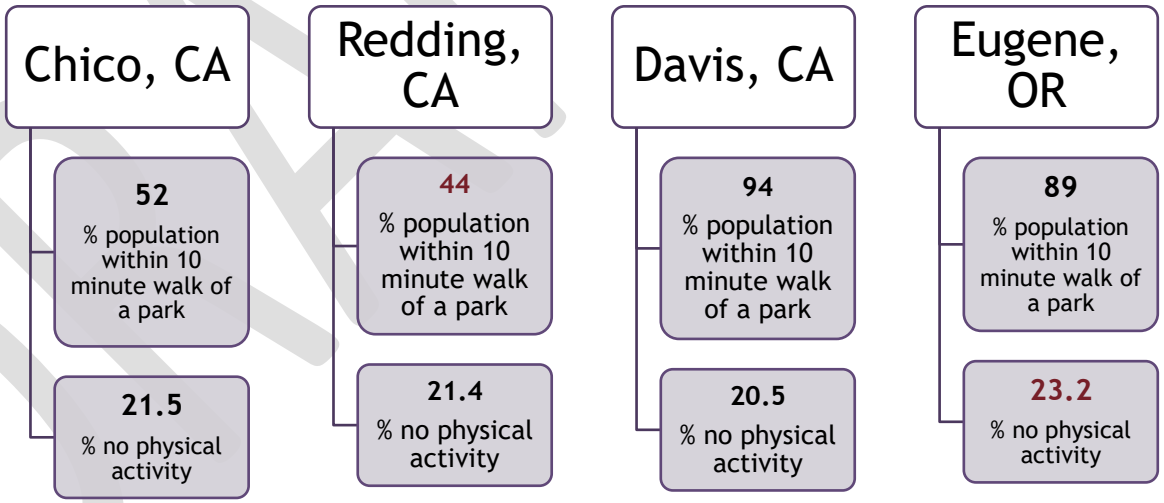


Figure 9 - Peer Cities Analysis
Source: ACS 2019, Trust for Public Land

The map below (Figure 10) shows the relative level of park access in Chico's different neighborhoods. The blue and green shaded circles represent .25-mile distances from parks or park entrances, a proxy for the 10-minute walk metric used by The Trust for Public Land.

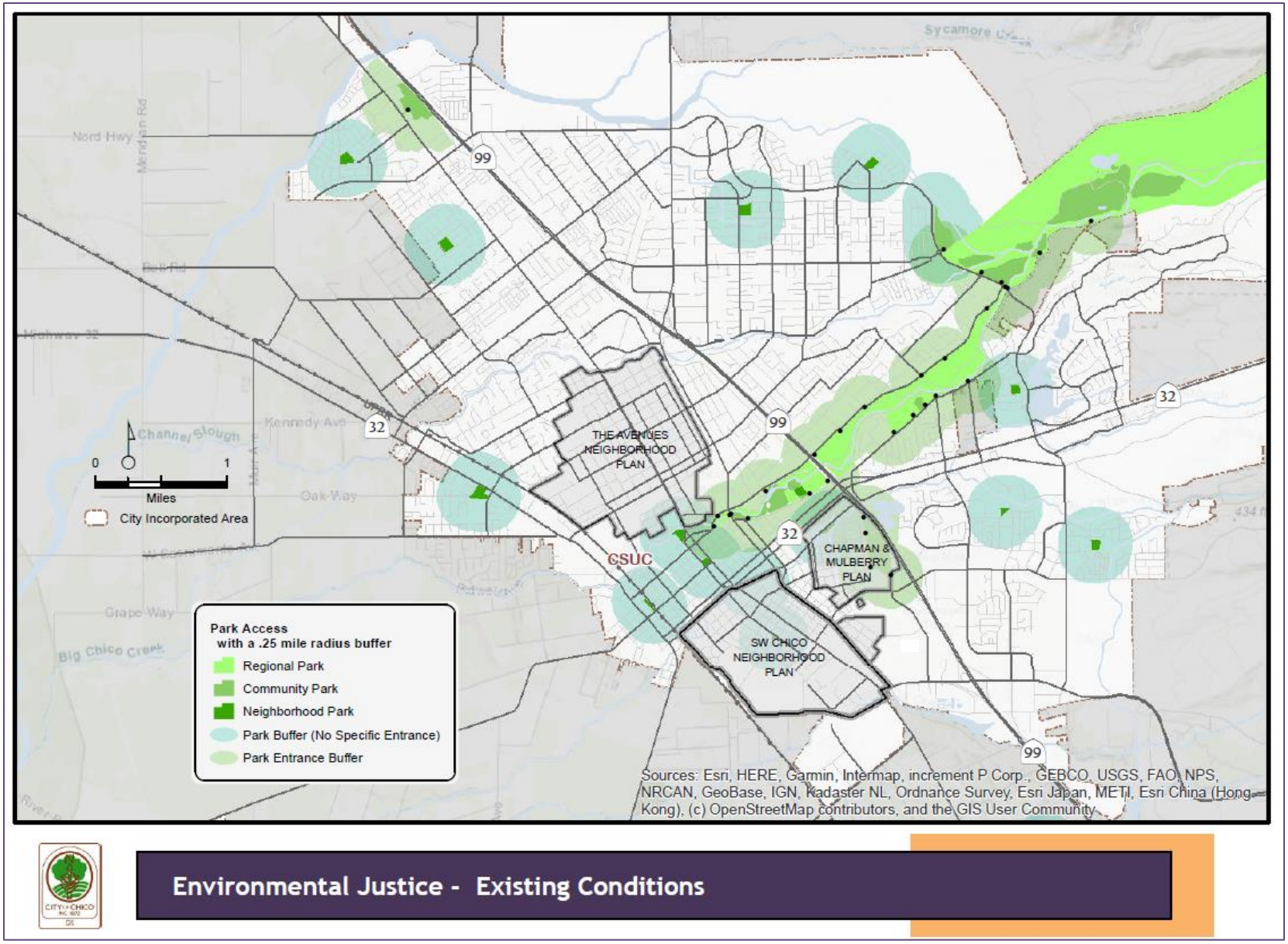


Figure 10 - Park Access

Another opportunity to easily incorporate physical activity into daily life, particularly for school aged youth, is ensuring that schools and community centers are distributed in a way which would allow for short trips by bike, stroller, or foot.

The map on the following page (Figure 11) shows the distribution of schools and community centers across Chico. It should be noted that while the location of these facilities is important, surrounding road infrastructure must be supportive of active transportation uses.

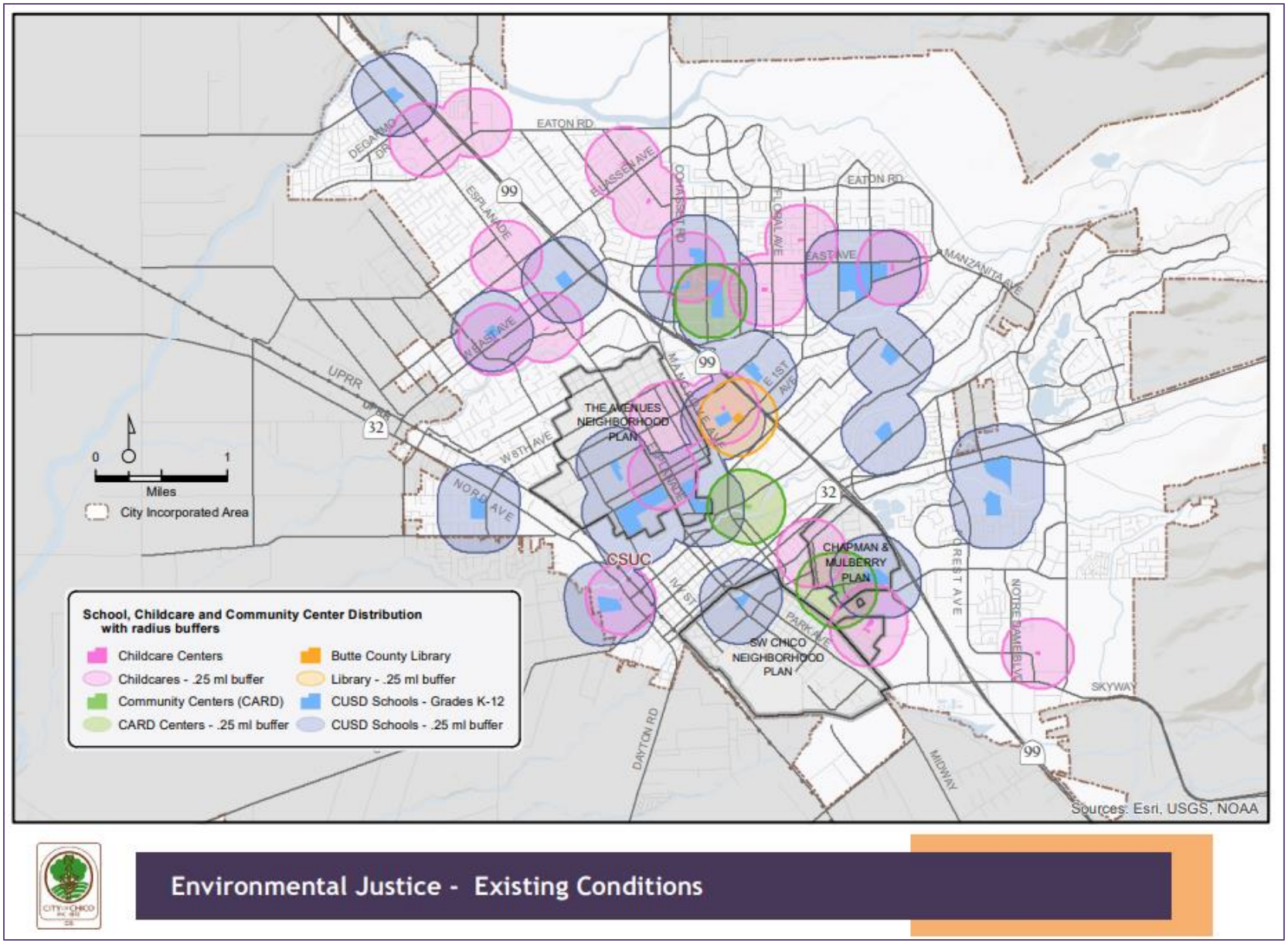


Figure 11 - School, Childcare, and Community Center Distribution

Active Transportation & Active Lifestyles

Another way to consider activity levels within the community is by assessing the feasibility of replacing car trips with walking, biking, transit, and other forms of active transportation. A city where conditions are more hospitable for active transportation stands to benefit in many ways, ranging from the economic performance of small businesses to improved air quality and community health. Further, there are many community members for whom active transportation including public transit is the only feasible option. Population groups such as youth under 16, those without driver's licenses, and the elderly stand to benefit the most from widespread active transit systems.

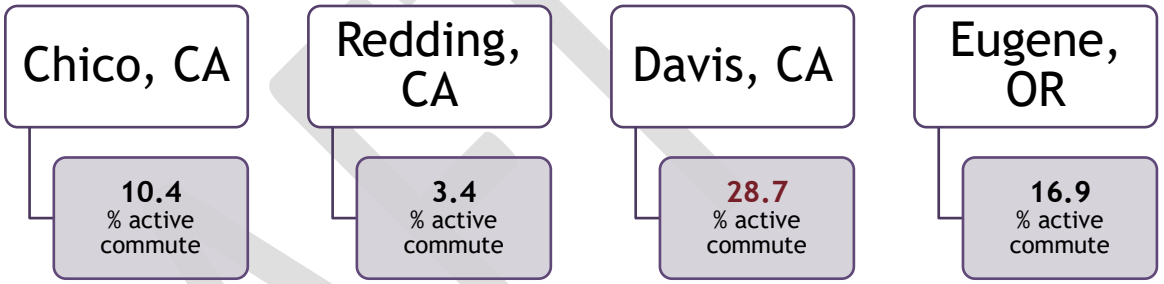


Figure 12 - Peer Cities Analysis Source: ACS 2019

One way of analyzing the prevalence of active lifestyles within a community is by examining the percentage of residents who commute by means other than a private or shared automobile. The table above (figure 12) shows the percentage of commutes within the peer cities group undertaken by bicycle, motorcycle, transit, or walking.

Relative to peer cities, Chico falls behind in terms of active commutes, with 10.4% of the population electing non-car commute methods compared with an average of 15% of commuters across the group.

This may be due to a number of causes which stem from the built environment in Chico. The following maps explore a variety of indicators which contribute to the likelihood of a person to utilize active transportation in their day-to-day lives.

Transit

The first mode of active transportation to be considered is the use of public transit. In Chico and Butte County as a whole, transit service is provided in collaboration with the Butte County Association of Governments and B-Line, the transit provider.

Many factors influence the feasibility of utilizing transit – these include at the most basic level the routes each bus travels, which are displayed on the map below (Figure 13), but also the frequency at which busses run (headways), the level of amenities at bus stops (i.e., shade structures, seating, garbage cans), and the connectivity of transit routes with other services (i.e., bike locking facilities, park & ride programs, etc.). Other factors which influence ridership are the cost of fuel and access to free parking.

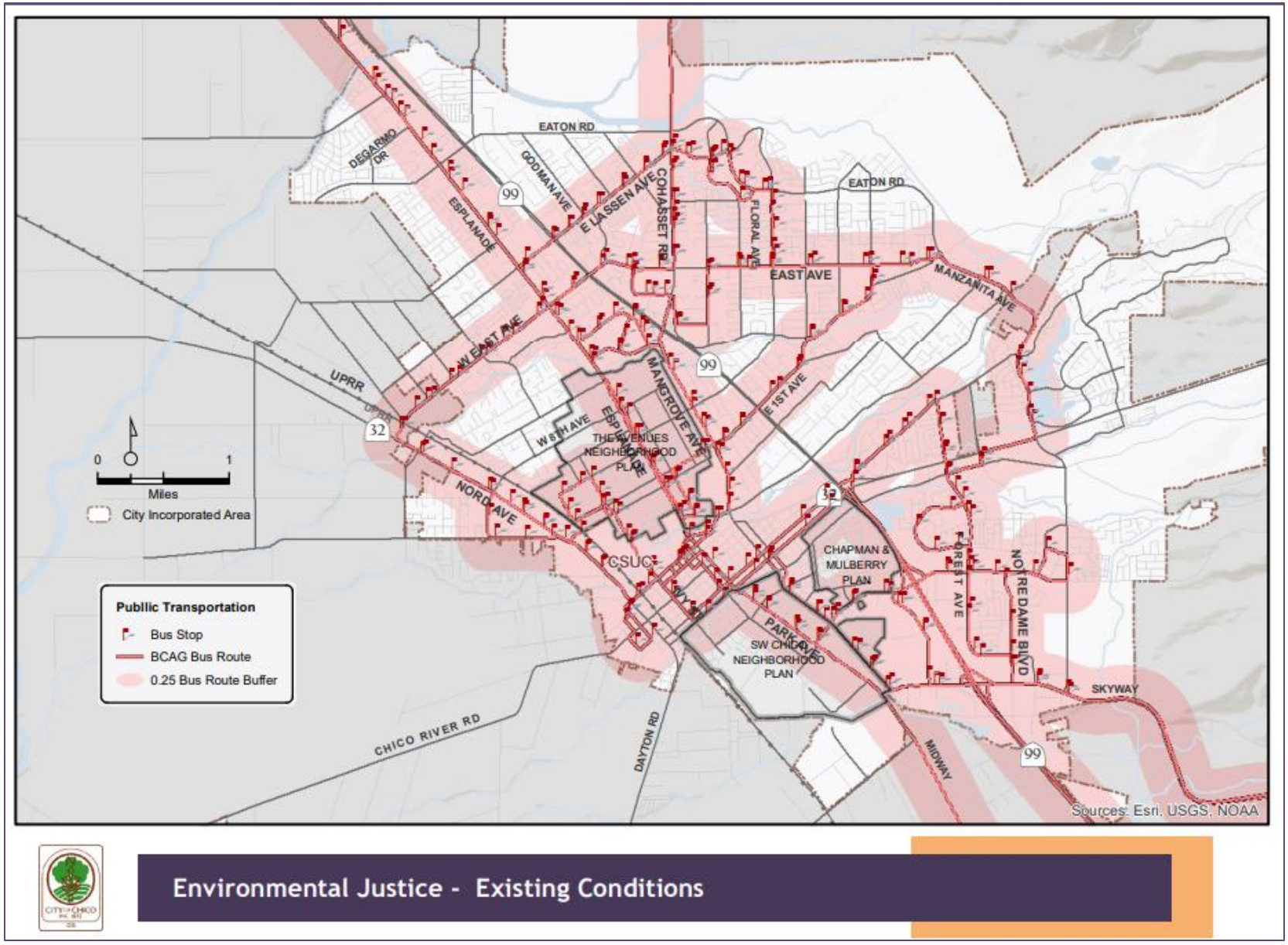


Figure 13 - Public Transportation

Walking

In 2019, the U.S. EPA created the National Walkability Index, which scores census block groups on their relative walkability, or the ease and utility of active transportation. The resulting maps combine intersection density, proximity to transit stops, employment mix, and employment & household mix to create a National Walkability Index Score. On the Walkability Index which is scored 1-20, higher scores represent a more walkable area owing to physical and economic conditions which are likely to promote walking trips.

The map below (Figure 14) shows the results of this index applied to Chico – green shaded areas are considered more walkable while orange and red shaded areas are more likely to require the use of a private automobile. The scoring gradations applied are those of the EPA and represent Chico's walkability relative to the national average.

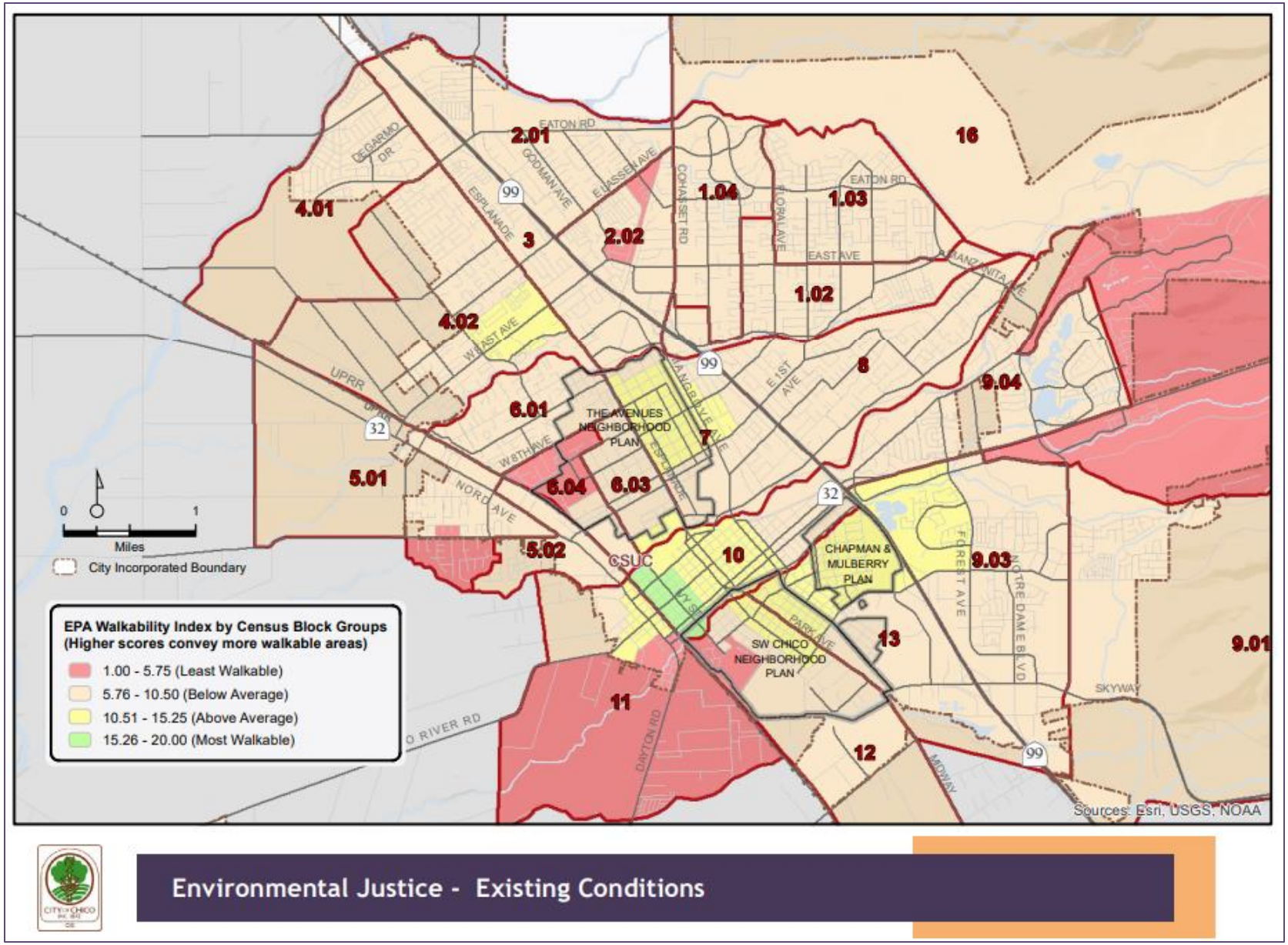


Figure 14 - EPA Walkability Index

Biking

In addition to walking and using transit, bicycling is a component of active transportation which the community and the City have both demonstrated interest in advancing, a sentiment which resulted in the Chico Bicycle Plan 2019 Update. Through that plan development process, residents identified Class I bike infrastructure as their highest preference for bike infrastructure. Class I infrastructure consists of separated facilities designed exclusively for the use of bicycles and pedestrians. These paths may have minimal cross traffic from motorists, such as in places where bike paths intersect with roadways. See figure 15 below for a selection of bike infrastructure examples.

Hesitancy over sharing road space with motor vehicles represents a substantial psychological barrier amongst most of the population, a group categorized as “interested but cautious” when it comes to biking in their communities. Access to and the utility of separated bike facilities (bike paths, protected bike lanes, and mixed-use paths) can greatly influence how likely an individual is to engage in active transportation, as well as increase the suitability of the activity for children, the elderly, and other groups.

Figure 15 - Selection of Bike Infrastructure Examples

The map on the following page (Figure 16) illustrates relative access to Class I facilities in Chico by mapping a .25-mile buffer for paths. Note the marked path entrances, as in some areas accessing these paths is more difficult than in well-connected areas such as around Bidwell Park.

Clockwise from top left: Examples of Class 1, Class 2, and Class 3 Bike facilities from around California.

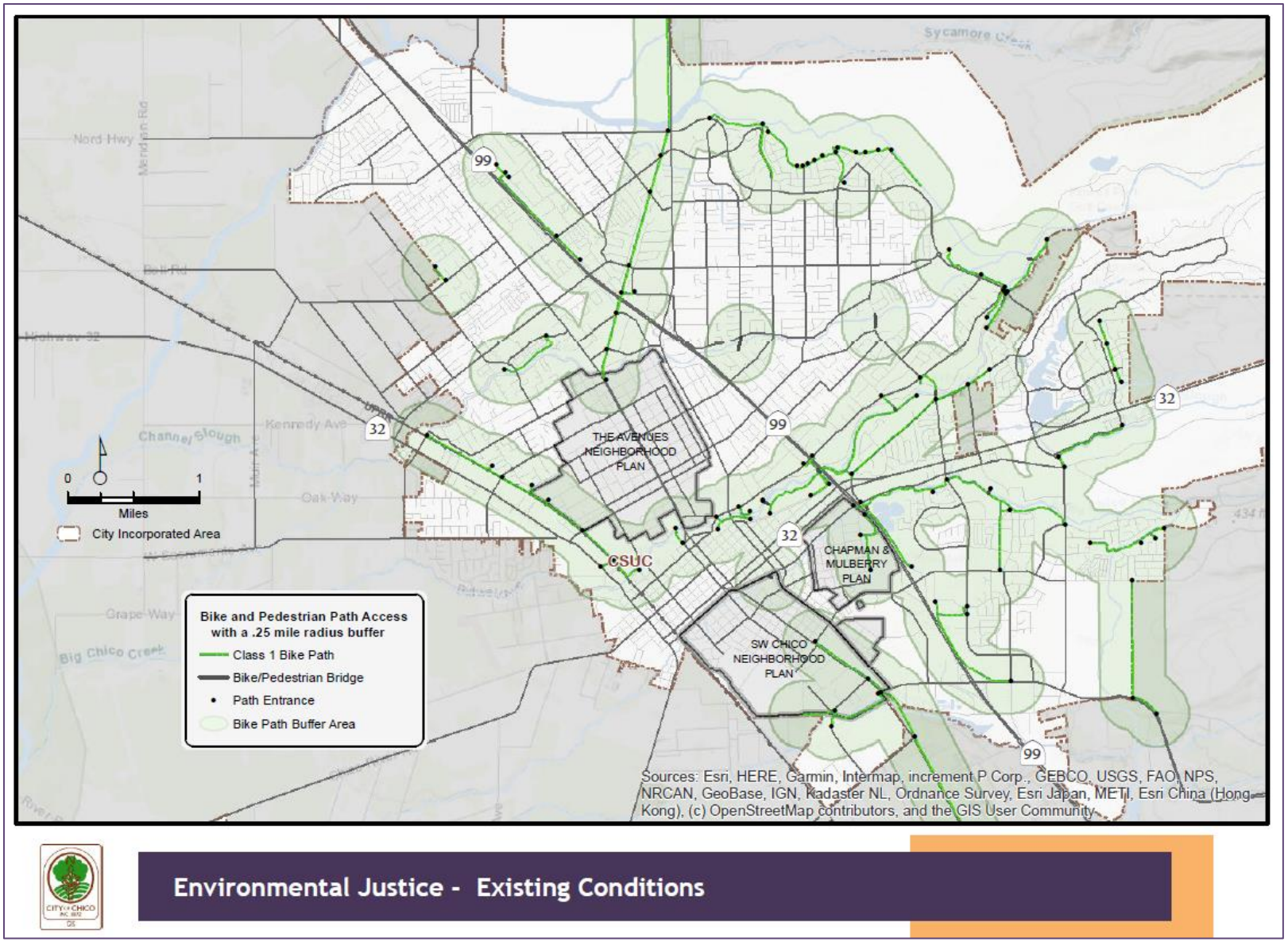


Figure 16 - Class 1 Bike Network

An Urban Forest: The Many Benefits of Street Trees

Trees on public and private property contribute greatly to the community. Trees, particularly those along city streets, offset many negative impacts of urbanization. By shading buildings, blacktop, and other pavement they help to reduce the urban heat island effect. By buffering street noise, improving air quality, and by creating a sense of well-being and charm urban trees substantially improve the quality of the urban environment. Increasingly, trees are being utilized by planners and cities as tools to improve shading and aesthetic character, two elements of the streetscape which directly influence the desirability of active transportation use and healthy lifestyles in a community.

Overall, Chico enjoys a substantial tree canopy and a vibrant urban forest. However, these resources are not distributed equally across the city. The map below (Figure 17) reflects the number of trees present in different areas relative to their overall area. This map exclusively represents a count of City-owned trees. Certain neighborhoods with high numbers of trees on private property may be slightly misrepresented as a result, and improvements to areas where there appears to be a shortage of City trees may be limited by scarcity of public land on which to plant more.

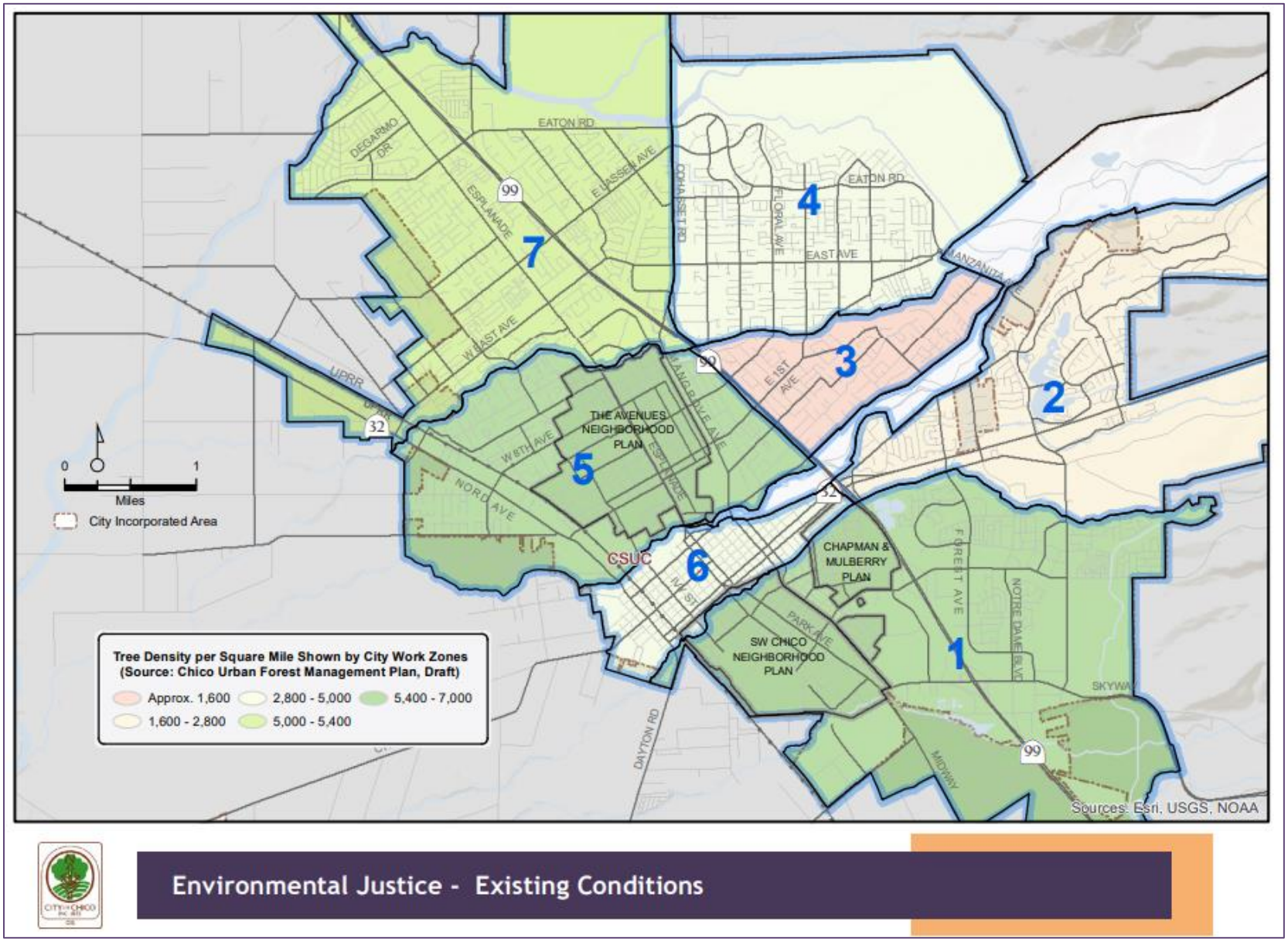


Figure 17 - City Owned Tree Canopy

Safe & Sanitary Homes

Access to safe, sanitary housing is important for everyone, from homeowners, to renters, to unhoused residents. Beyond being a source of shelter, a home gives families a sense of security, health, peace of mind, and center of life. Whether or not a person's home is in a resource-rich, complete neighborhood; is of high quality and free from health hazards; is affordable and not a financial burden; and is a place where people can remain if they so choose are all factors that have a profound influence on a person's health and well-being. The City of Chico is using two themes to assess the condition of housing in the City: housing availability and housing quality.

Housing Availability

The vacancy rate of rental housing in Chico has increased slightly in the period since the 2018 Camp Fire, up to 3.3% from 2% in the third quarter of 2018. This is still below the vacancy rate where a rental market will be considered "balanced" of 5%, a rate where there is adequate availability for renters and demand for landlords, a factor which directly impacts both availability and affordability. The chart at right shows the trend in vacancy rates by quarter in Chico from 2018-2021. A potential factor in this increase in vacancy, largely in the most recent four quarters, is the impact the COVID-19 pandemic has had on student enrollement and student living arrangements at CSU Chico.

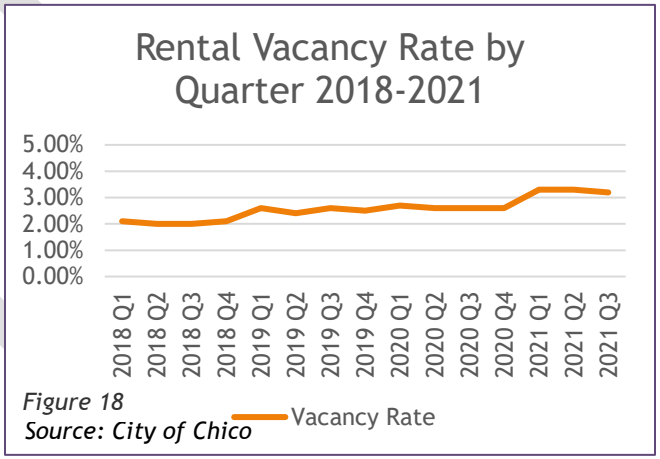


Figure 18
Source: City of Chico

Income Level	RHNA	Units Produced 2014-2021	% of RHNA Produced 2014-2021	Units Produced and Planned 7/14-6/22	% of RHNA Produced and Planned Through 6/22
Extremely Low	487	142	29.2%	204	41.9%
Very Low	487	193	39.6%	442	90.8%
Low	643	114	17.7%	321	49.9%
Moderate	708	335	47.3%	335	47.3%
Above Moderate	1,638	3,599	219.7%	3,599	219.7%

Table 1 - Source: City of Chico

To address this imbalance, the creation of new housing, both subsidized affordable and "market rate" is essential. The table at left shows the number of housing units produced between 2014 and 2022 by income affordability level relative to the Regional Housing Needs Allocation (RHNA) established in 2014. See Appendix A for an explanation of the income brackets used here.

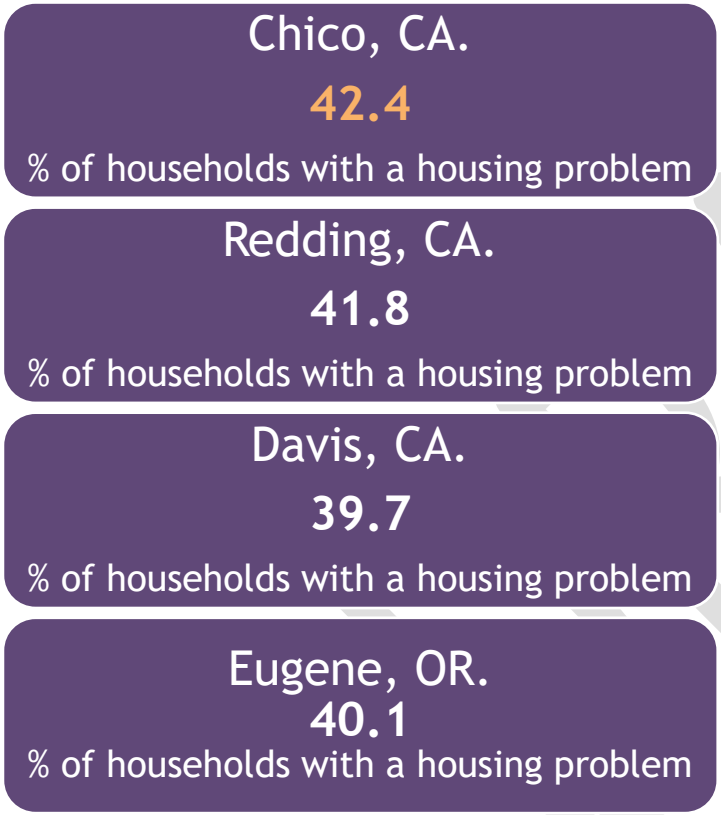
Within the Housing Element of the General Plan is a listing of sites zoned to accommodate housing for the various income level households. In addition to demonstrating available land for housing and incentives for the development of affordable housing to serve Low-, Very Low- and Extremely Low-Income households, the City's Housing Division facilitates the distribution of available financial resources to support affordable housing including that which targets special needs populations. The table on the following page (Table 2) represents the efforts made by the Housing Division which go beyond the designation of land for housing uses and incorporates programs which specifically set out to assist Low- and Extremely Low-income and special needs populations in the 2014-2022 planning period.

Outcome	Results	2014 Quantified Objectives Through June 2022
Fund the development of extremely-low income, special needs affordable housing	29 units	30 units
Incentivize development of affordable units within the Corridor Opportunity Site overlay	58 low-income units, one moderate income unit	50 moderate-income units, 20 low-income units
Facilitate the development of affordable units in the TND Zoning District	158 low-, very-low and extremely-low income units, 2 moderate income units	97 moderate-income units, 92 low-income units
Fund the development of low-income affordable senior housing	159 units	50 low-income units
Assist households with the Tenant Based Rental Assistance Program	194	140 low-income households
Preserve the affordability of at-risk affordable units	434	434 units
Provide funding for low-income owner-occupied housing rehabilitation	98	30
Assist in the development of self-help homes	16	10
Produce affordable single-family homes on a City-owned land trust	0	4
Provide Accessibility improvements for low-income renter households	8	No quantified objectives
Storm drain, roadway, and lighting improvements in low-income neighborhoods	80 people	No quantified objectives

Table 2 - Source: City of Chico

Housing Quality and Affordability

The U.S. Department of Housing and Urban Development (HUD) collects data on housing conditions across the country, utilizing certain metrics to gain a high-level understanding of housing quality. There are four indicators utilized to determine if there is a housing problem within a household. These four are 1) housing unit lacks complete kitchen facilities; 2) housing unit lacks complete plumbing facilities; 3) household is overcrowded (>1 person/room); 4) household is cost burdened (average monthly costs > 30% of household income). A household is said to have a housing problem if they have any 1, or more, of the 4 problems.



Source: ACS 2019

Figure 19 - Peer Cities Analysis

Relative to peer cities, Chico experiences a marginally higher percentage of households with a HUD-defined housing problem. Consistent across the peer cities group is a trend showing that substantially greater percentages of households experiencing housing problems are renter-occupied households compared to owner-occupied households. Of the 42.4% of households in Chico experiencing a housing problem, three times as many households are renter-occupied compared to owner-occupied[4]. This trend indicates a challenge with the quality and affordability of rental housing within Chico and across the peer-cities group.

[4] American Community Survey, 2019

Cost burden, or situations where households spend greater than 30% of their income on housing each month represent a sizable portion of the HUD-defined housing problems in Chico. The following table from the National Low Income Housing Coalition shows the annual income needed to afford a rental unit in the Chico market without a cost burden depending on size.

Unit Size	Annual Income Needed to Afford Unit
Zero-bedroom (studio)	$33,000
One-bedroom	$36,160
Two-bedroom	$47,680
Three-bedroom	$67,680
Four-bedroom	$82,560

Table 3 -Source: National Low Income Housing Coalition, 2021 Out of Reach

The map at right (Figure 20) shows areas within Chico where the number of residents experiencing poverty are concentrated. The poverty level is established by the Federal Government based on the number of people in the household. For a single person, the poverty line is set at $12,880/year and for a family of four it is $26,500/year[5].

Comparing those figures to the income levels needed to afford rental units, the poverty status map at right can serve as an indicator for neighborhoods where a greater percentage of residents are experiencing high levels of cost burden in their housing. Renting affordable, non-subsidized housing often entails trade-offs on housing quality and suitability as older housing stock often rents cheaper and exposes residents to increased risk to health and wellbeing due to the quality of the unit.

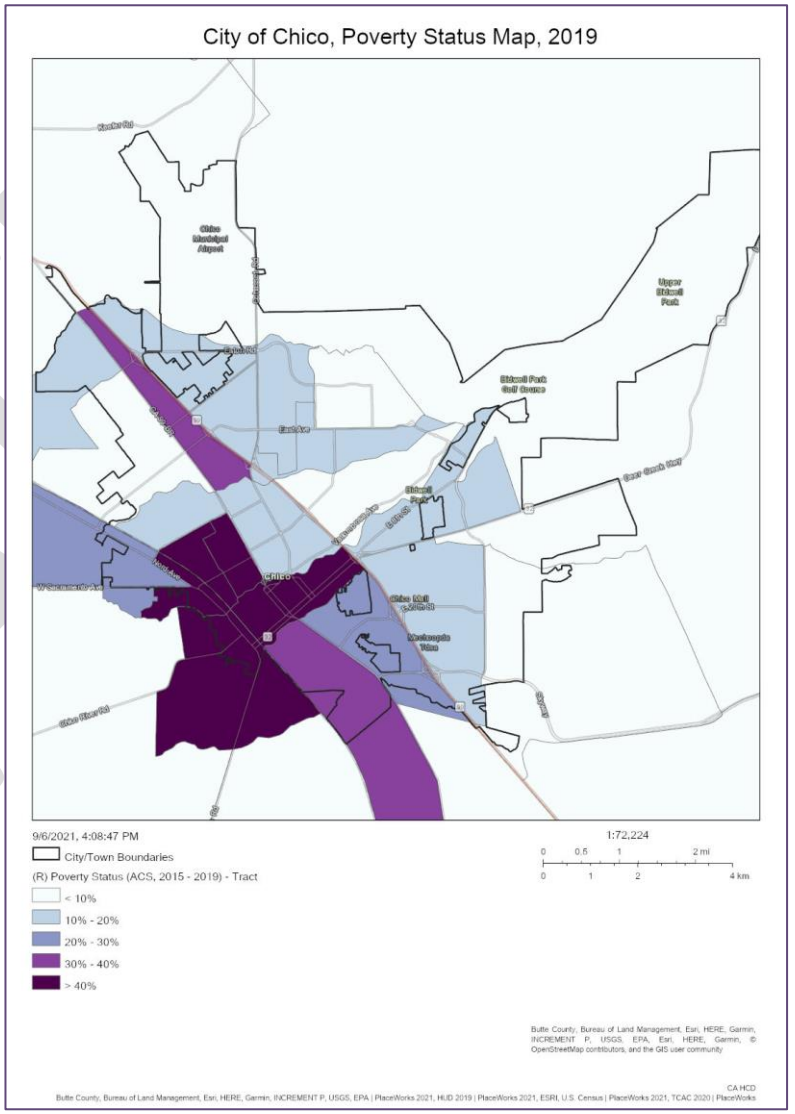


Figure 20 - Poverty Status

[5] Source: CoveredCA, Program Eligibility by Federal Poverty Level

Over time, construction techniques and the materials utilized in housing construction have shifted as the development industry and building codes adapt to newly emerging best practices and safety improvements. Older housing, particularly that which has not been maintained and brought up to code can result in unsafe housing conditions due to pest infestation, water intrusion, mold, poor insulation, and exposure to toxins such as lead and second- and third-hand smoke. While these impacts exist on a household-to-household basis, considering the prevailing age of housing by census tract allows for a high-level view of areas where housing age may play a role in public health.

In 1986, Congress banned the use of lead in piping for new construction but allowed those pipes already in place to remain. There is no similar date where asbestos can no longer be found in building materials, but prevalence declined greatly after 1981 due to piecemeal bans and voluntary phase-outs. Displayed on the map that follows (Figure 21), the percent of housing constructed before 1990 (shaded tracts) can be interpreted as an estimate of the rate at which areas are likely to experience higher levels of certain types of pollution burden related to housing age.

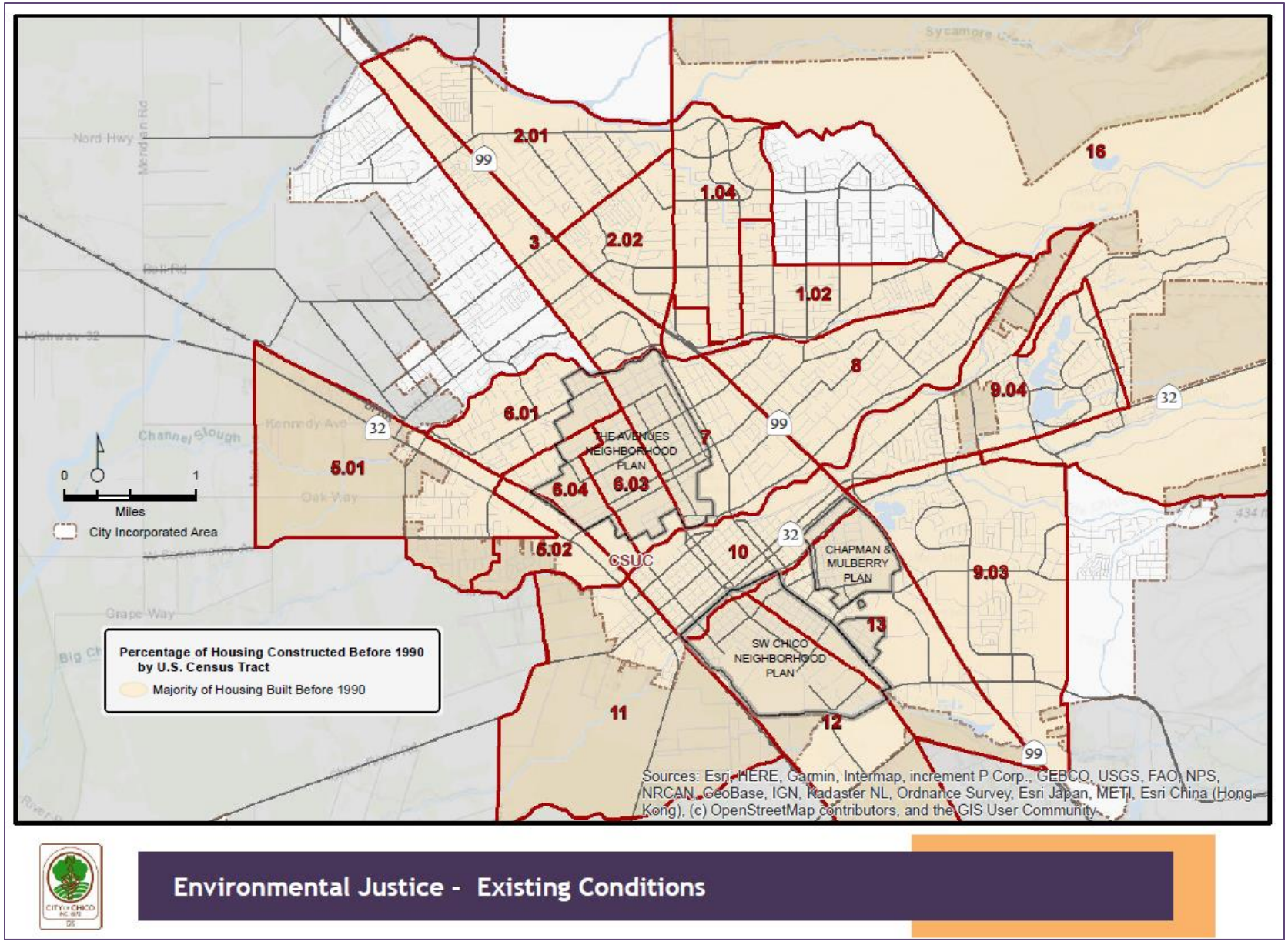


Figure 21 - Housing Stock Age

Access to Healthy Food

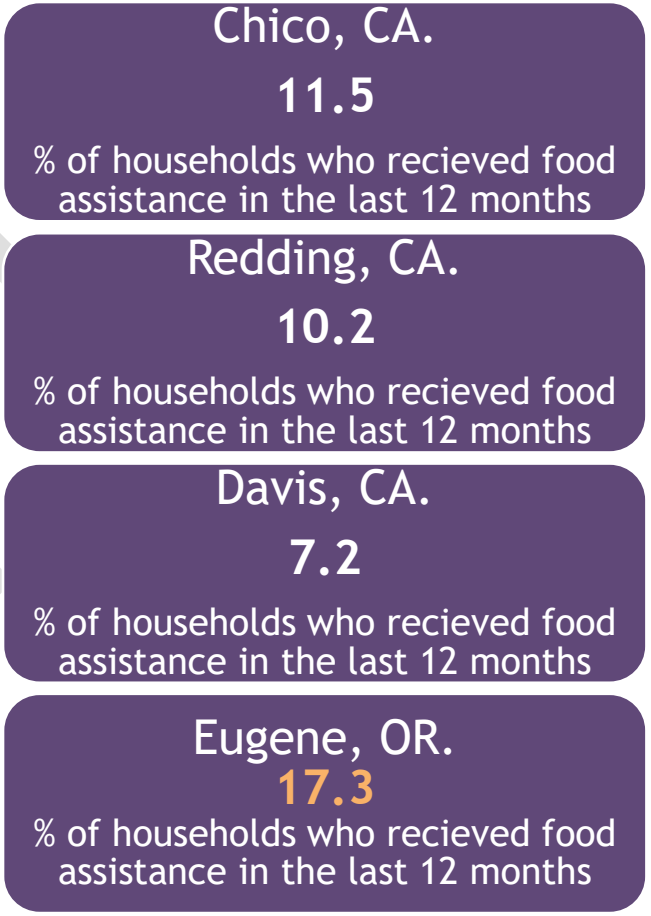
Despite being located in some of the richest agricultural land in the state, healthy food remains out of reach for some Chico residents. Having good food access means that food is affordable and nutritious, and within an accessible distance from home. When healthy food is relatively inaccessible, it can lead to a number of social impacts. These include higher risks of obesity and diabetes and increasing difficulty focusing at school or work due to hunger. Because food is one of the most basic needs, food insecurity can force people to make choices that place food above other necessities, like medicine or other basics.

Economic Barriers

The Supplemental Nutritional Assistance Program (SNAP), otherwise known as CalFresh or Food Stamps provides nutrition benefits to supplement the food budget of low-income families to improve access to healthy food. In some cases, discounts for CalFresh users are available for local and organic produce, such as at the Chico Farmers Market and the Chico Natural Foods Cooperative.

While SNAP is generally successful at increasing food budgets for low-income households, there remains an unmet need amongst those who struggle with economic barriers that prevent them from accessing healthy foods. Butte County estimates that only 62.2% of SNAP eligible households receive benefits, and the USDA has found that 88% of SNAP participants report some kind of barrier to achieving a healthy diet throughout the month.

For those who are not eligible for SNAP benefits, or whose need is not fully met by the SNAP program, food banks and pantries can help to support healthy diets. Approximately 50% of the student population at CSUC utilize the on campus Hungry Wildcat Food Pantry and the North State Food Bank served 11,100 residents across the county in January 2022, an estimated 27% of the food insecure population.



Source: ACS 2019

Figure 22 - Peer Cities Analysis

These resources are not without their challenges either, as food pantries generally lack culturally appropriate foods, limiting the effectiveness of their service to non-white populations. Additionally, geographic access to food banks and pantries can be limiting.

Geographic Constraints: Food Deserts

People living in certain areas in Chico face greater challenges finding healthy food, especially those who lack good transportation options to reach full-service grocery stores. Grocery stores are important because they provide the most reliable access to a wide variety of nutritious and affordable produce and other foods compared to other types of food outlets such as convenience stores and smaller neighborhood markets. In Chico, food access disparities exist across neighborhoods: several areas, including North Chico, the Chapman & Mulberry Neighborhoods, and Southwest Chico represent areas that experience both low Area Median Incomes and relatively limited access to grocery stores or other healthy food resources.

Community gardens and farmers markets can help to improve fresh food accessibility in areas of lower food access. Community gardens are dedicated plots of land where residents can grow food or other plants - many are started by residents who recognize that their communities are underserved by traditional fresh food retailers, and the Chico General Plan is supportive of community garden projects. Some research has shown that people who participate in community gardens eat more fruits and vegetables and worry less about running out of food before the end of the month. Chico's Farmers Market, as well as the Natural Foods Cooperative accept SNAP, and offer market-match or other discounts bringing healthy, locally produced food into the reach of low-income shoppers.

As Chico continues to build out its stock of incorporated land, it is important not only to consider areas which already experience geographic challenges in accessing healthy foods, but also the conditions in areas of the City identified as high-growth areas. These are areas where planners anticipate increased housing development and population levels over the next 8-year Housing Element cycle. For 2022-2030, these areas are north and southeast Chico, an assessment based on the presence of approved and under-construction projects such as Meriam Park in the southeast, and high concentrations of vacant parcels eligible for housing development.

The following map (Figure 23) represents current large grocery store locations within Chico, as well as the location of farmers markets and community gardens. A 0.5-mile radius was selected for the distance from a grocery store in keeping with the USDA standard for food access in Urban Areas, as well as being an achievable distance for one to walk in less than 15 minutes. One important consideration is that this map represents an 'as the crow flies' distance measurement and fails to account for localized mobility challenges such as limited opportunities to safely cross Highway 99, the railroad tracks, or State Route 32.

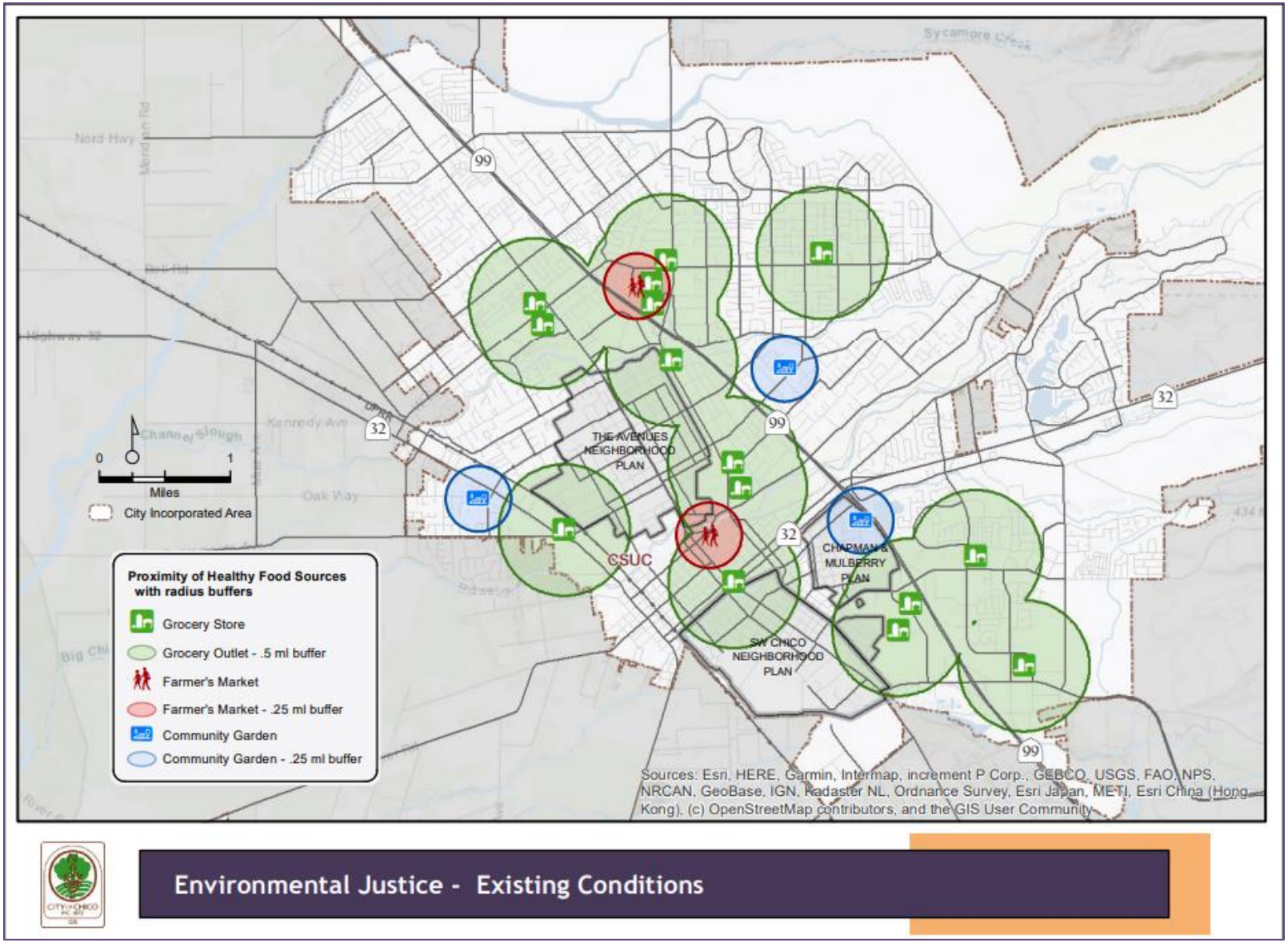


Figure 23 - Healthy Food Access

Geographic Constraints: Food Swamps

A person's food environment is more than just physical access to fruits, vegetables, and other nutritious foods. Economic access and the affordability of healthy foods in a neighborhood is also important. The price of food—in addition to taste, nutrition, convenience, and other factors—affects people's food choices. Food "swamps", or areas where there is an oversaturation of fast-food outlets and unhealthy retailers, contribute to high rates of obesity and other health issues.

Healthier foods have been found to be more expensive than less healthy foods when measured per calorie. For this reason, low-cost diets are associated with higher calorie intake at the expense of fewer nutrients, while healthier diets tend to be more expensive. Studies have shown that fast food outlets are more common in lower-income neighborhoods, and that these food "swamps" are more directly tied to obesity than lack of healthy food access[6].

Relative to the peer cities group, Chico experiences an average rate of diabetes amongst the population, and a higher rate of obesity. While these health metrics represent the culmination of many factors, eating fast-food more than once or twice a week has been linked to obesity and type 2 diabetes, a link which highlights the importance of considering the relative accessibility (economic and geographic) of different foods within the community.

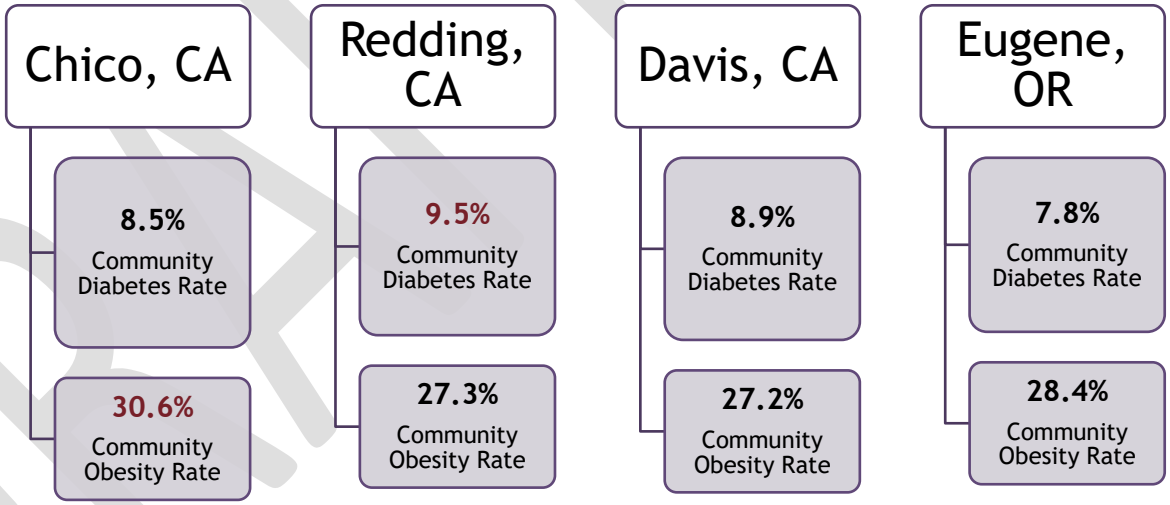


Figure 24 - Peer Cities Analysis
Source: ACS 2019

The map below (Figure 25) shows quarter mile buffers for all fast food, tobacco, and alcohol outlets in Chico. While market forces related to consumers preference for a variety of food service options can explain in part the number of fast-food outlets, access to fast food is at least as easy as access to healthy foods in Chico, potentially more so in certain areas, or when accounting for price considerations.

[6] Cooksey-Stowers, Kristen, Marlene B. Schwartz, and Kelly D. Brownell. 2017. "Food Swamps Predict Obesity Rates Better Than Food Deserts in the United States" *International Journal of Environmental Research and Public Health* 14, no. 11: 1366. https://doi.org/10.3390/ijerph14111366

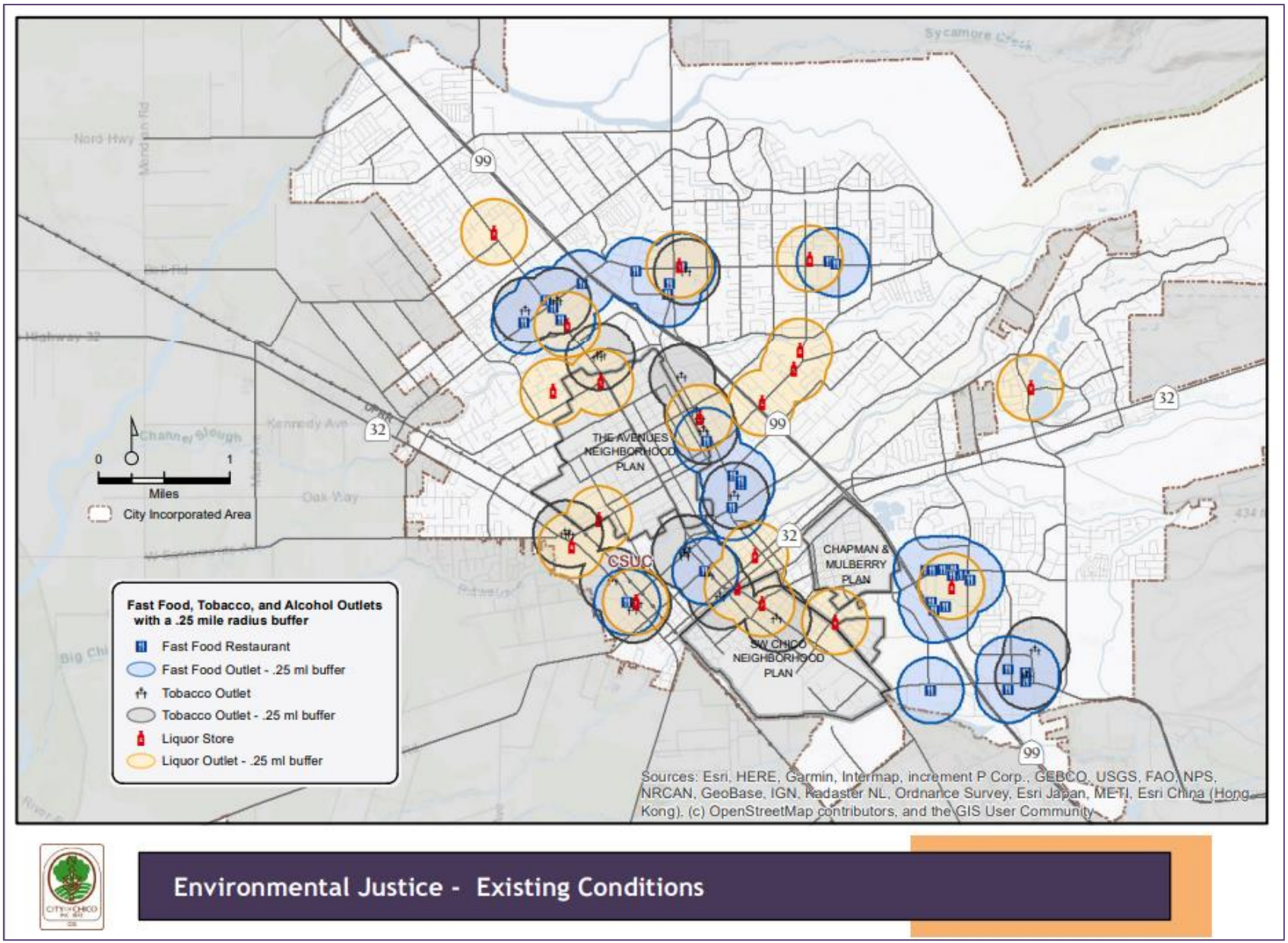


Figure 25 - Food Swamps

Civic Engagement

Having your voice heard in local decisions is a fundamental aspect to feeling a part of any community, which is why everyone should have a say in the decisions that affect their lives. This is especially true of those communities who have historically been left out of major planning decisions. Building trust in institutions and decision-making processes, engaging directly and consistently with communities who have long been affected by environmental injustice, and prioritizing improvements in historically disinvested communities can help to build a more equal foundation for a future of opportunity.

Increasingly, the internet represents the primary avenue by which people read news; connect with their families and friends; work and go to school; and during the COVID-19 pandemic, interact with local government. While it is too early to predict what civic engagement will look like in the years after COVID-19, it is possible to be certain about the critical role internet access plays in the community, on par with electricity and sewer connection. However, unlike other utilities of similar importance, access to the internet is not nearly as ubiquitous, representing a concerning gap between households without internet access and the community at large known as the "digital divide". In Chico, 5.9% of households report having no at-home internet access (Figure 26). The following map (Figure 27) displays the level of broadband connectivity across the City with the least-connected areas in red.

Chico, CA.	Redding, CA.
5.9	**11.4**
% of households without any internet access	% of households without any internet access
Davis, CA.	**Eugene, OR.**
4.6	**5.7**
% of households without any internet access	% of households without any internet access

ACS. 2019

Figure 26 - Peer Cities Analysis

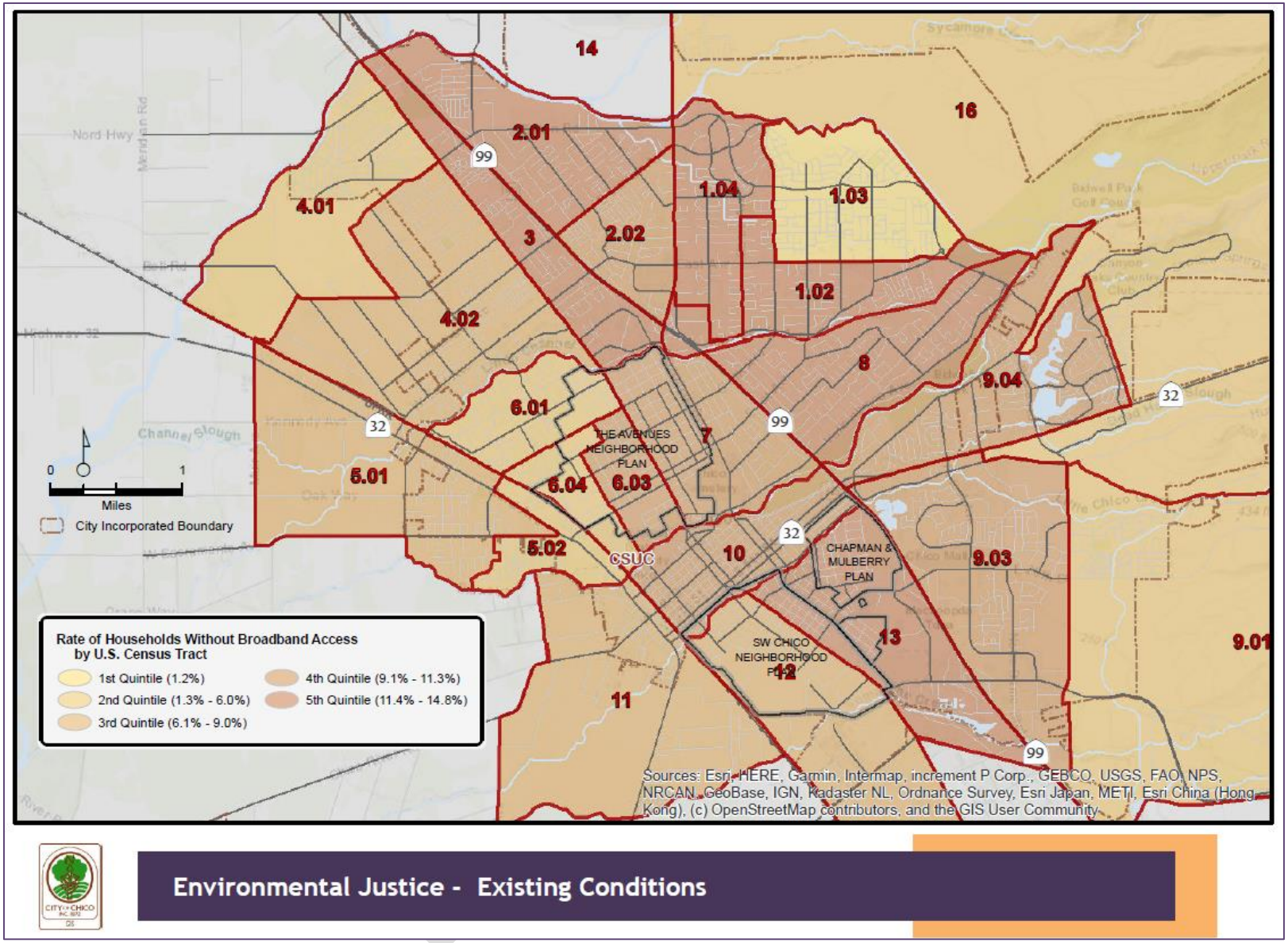


Figure 27 - Broadband Access

Though access to the internet is important, being able to read and fully comprehend the materials produced by government and community organizations is even more critical to promoting full participation in civic society at all levels.

Presently, there are some neighborhoods in Chico with concentrated levels of households with limited capacity to speak or read English, captured by the American Community Survey as being "Limited English Households". The relative rate of these households in Chico is mapped below (Figure 28), where red shaded census tracts contain the highest percentage of language-isolated households.

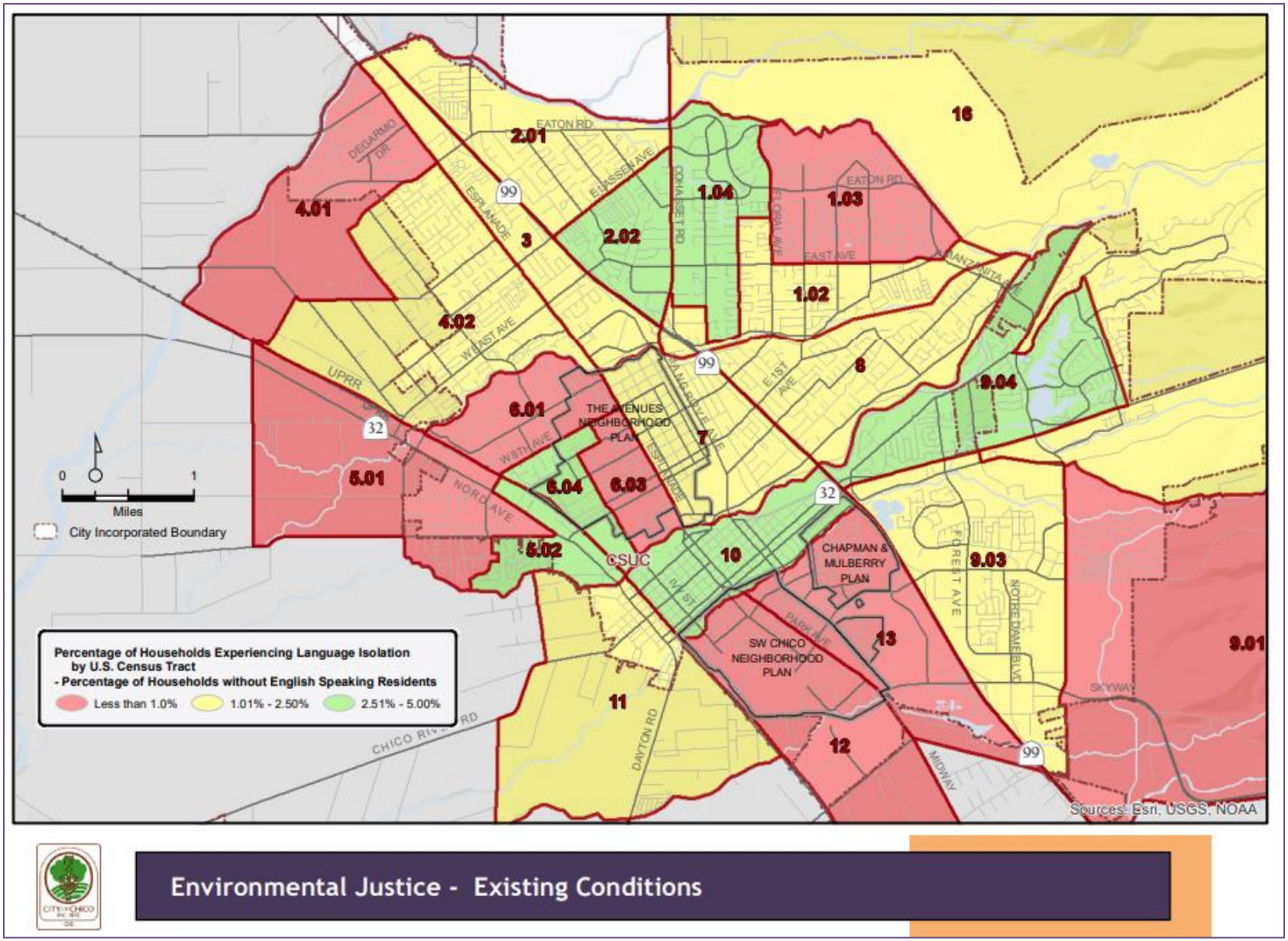


Figure 28 - Language Isolation

Next Steps

Planning Timeline

The intent of this Existing Conditions Report is to establish a baseline for the development and eventual adoption of an Environmental Justice Element in the City of Chico General Plan. Following the public release of this existing conditions report, a period of public input will seek to augment the research completed by staff and the contributions of stakeholder groups.

After the incorporation of public input, city staff will work to create a draft Environmental Justice Element, developing a policy framework to address the needs of the City of Chico regarding environmental justice topics. These goals will be available for public review, and another round of community engagement will both refine their intent and give guidance for the development of supporting policies and actions which will make up the Environmental Justice Element.

Getting Involved

Opportunities for community engagement with this process will be forthcoming. To remain involved with the process, subscribe to our mailing list, follow Chico Sustainability on Facebook, and track progress and review documents posted to our webpage: https://chico.ca.us/environmental-justice.

Additional Resources

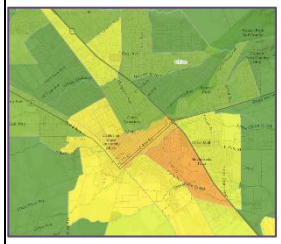
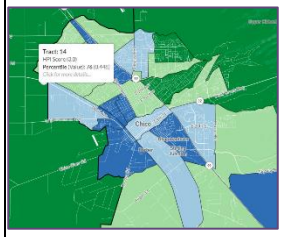
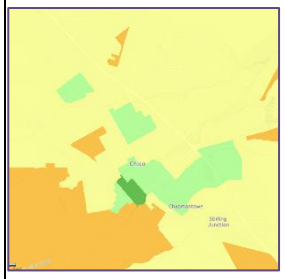
All of the data sources used in the creation of this report are accessible to the general public. Additionally, there are several sources which are related to topics discussed in this report, but which were not directly included. For a list of additional resources to explore, see Appendix B.

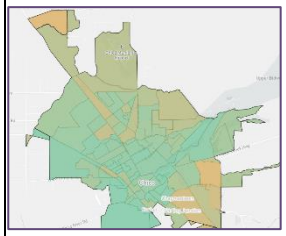
Appendix A: State Income Categories, Butte County, 2021

		Household Size				
Income Category	**% of Area Median Income**	**1**	**2**	**3**	**4**	**5**
Extremely Low	0-30%	$14,850	$17,420	$21,960	$26,500	$31,040
Very Low	31%-50%	$24,750	$28,300	$31,850	$35,350	$38,200
Low	51%-80%	$39,600	$45,250	$50,900	$56,550	$61,100
Median	100%	$49,500	$56,550	$63,650	$70,700	$76,350
Moderate	81%-120%	$59,400	$67,900	$76,350	$84,850	$91,650

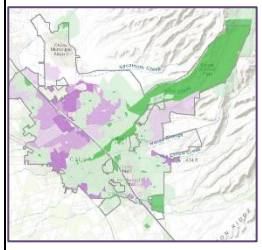
Table 3 - Source: City of Chico

Appendix B: Additional Resources

	CalEnviroScreen 4.0 – The State of California's Environmental Justice Screening Tool is available at: https://experience.arcgis.com/experience/11d2f52282a54ceebcac7428e6184203/page/Draft-CalEnviroScreen-4.0/
	Healthy Place Index 3.0 is a statewide resource compiled by Public Health Alliance of Southern California – view the full map at: https://map.healthyplacesindex.org/?redirect=false
	The EPA Walkability Index compiles many metrics which are used to inform a nationwide assessment of the feasibility of walking for transportation and recreation in a community. You can explore the map at: https://epa.maps.arcgis.com/home/webmap/viewer.html?webmap

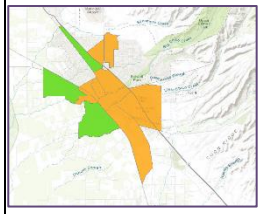


The Tree Equity Score compiles population characteristics and a satellite assessment of tree cover in a community to determine how equitably the urban forest serves residents. This differs from the analysis conducted above as this resource includes privately owned trees. Explore Chico's Tree Equity Score at: https://www.treeequityscore.org/map/#11.41/39.7467/-121.8112



Parkscore is a project of the Trust for Public Land which scores cities across America on their progress towards the Trust's goal of a park within a ten-minute walk of every home in every city. Check Chico's progress on their website at: https://www.tpl.org/city/chico-california

The Child Opportunity Index is developed by Diversity Data Kids, an organization who seeks to quantify the effects of Environmental Injustice on the youth who experience it. Their map showing aggregate scores for impacts such as park access, school quality, healthy food access and more are available at: https://www.diversitydatakids.org/maps/#/explorer/



The USDA Food Research Atlas identifies census tracts which are both low-income and have low access to stores at .5- and 1-mile intervals in developed areas such as Chico. To explore this resource, go to: USDA ERS and select the "LI and LA at 1 and 10 miles/.5 and 10 miles" options in the legend.

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