CHAPTER 13

ENVIRONMENTAL JUSTICE

13.1 INTRODUCTION

The State of California defines Environmental Justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." Fair treatment means that no group of people should bear a disproportionate share of any negative environmental consequences associated with industrial, governmental, and commercial operations and policy implementation.

LEGAL REQUIREMENTS

In 2016, Senate Bill 1000 amended California Government Code Section 63502 to require cities and counties with disadvantaged communities (DACs) to incorporate environmental justice (EJ) policies into their general plans. If a city, county, or city and county has a disadvantaged community, then the environmental justice element, or related environmental justice goals, policies, and objectives integrated into other elements, are required to do all of the following:

- Identify objectives and policies to **reduce the unique or compounded health risks** in disadvantaged communities by means that include, but are not limited to, the reduction of pollution exposure—including the improvement of air quality—and the promotion of public facilities, healthy food access, safe and sanitary homes, and physical activity.

Garden Grove elementary school children show off vegetables from a local garden.

- Identify objectives and policies **to promote civil engagement in the public decision-making process.**

- Identify objectives and policies that **prioritize improvements and programs that address the needs of disadvantaged communities.**

Environmental justice seeks to correct long-standing and existing inequalities regarding pollution and health burdens that certain neighborhoods experience. Environmental justice is grounded in principles of justice and fairness and focused on creating a society in which everyone can participate, prosper, and reach their full potential. Equitable outcomes come about when smart, intentional strategies are put in place to ensure that everyone can participate in and benefit from decisions that shape their neighborhoods and communities.

Scope and Content of the Environmental Justice Element

This Environmental Justice Element contains a comprehensive set of goals and policies crafted to increase the role and influence of historically marginalized populations and to reduce their exposure to environmental and health hazards. This Element is structured as follows.

- **Background:** A discussion of environmental justice principles, the methodology for identifying Environmental Justice Communities, and the specific demographics of the disadvantaged communities (i.e., environmental justice communities) in Garden Grove.

- **Environmental Justice Issues and Concerns for Garden Grove:** An evaluation of baseline environmental issues impacting Garden Grove DACs, including pollution burden, population characteristics, educational attainment, health and wellness, food insecurity, and park access.

- **Goals and Policies:** The goals, policies, and programs describe how the City of Garden Grove will incorporate environmental justice into decision making and support positive outcomes for affected residents.

13.2 Environmental Justice Communities

California law defines "disadvantaged communities" (or "environmental justice communities") as areas that are most afflicted with a combination of economic, health, and environmental burdens. The California Communities Environmental Health Screening Tool *CalEnviroScreen* was developed by the California Environmental Protection Agency to identify environmental justice communities using the following indicators:

- **Pollution Burden:** Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation; and

- **Population Characteristics:** Areas with concentrations of people with low incomes, high unemployment, low levels of homeownership, high rent burden, low levels of educational attainment, and/or are sensitive populations (e.g., disabled individuals, seniors, and emancipated foster youth).

CalEnviroScreen is a percentile ranking of U.S. census tracts to demonstrate the degree of burdens present in that tract relative to the rest of the State. For example, a 75th percentile ranking for a census tract would mean that the tract falls within the top 25 percent of all CalEnviroScreen scores statewide—and is among the highest burdened census tracts in California (meaning a high score is not good). A score of 75 or higher also means the census tract is considered a Disadvantaged Community for the purpose of the Environmental Justice Element. See **Exhibit ENV-1** for CalEnviroScreen percentile scores for all census tracts in Garden Grove.

On this basis, nine (9) census tracts in Garden Grove are classified as Disadvantaged Communities, but four (878.06, 890.01, 879.02, and 879.01) have either no or a very low number of persons living in residential units (see **Table 13-1**). However, five (891.06, 888.02, 885.01, 881.01 and 890.03) of the nine tracts designated as DACs lie entirely within the City of Garden Grove and are home to approximately 20,300 people. Census tracts 891.06, 888.02, 885.01, and 890.03 are generally located along the SR-22 freeway and the eastern end of Garden Grove Boulevard. Census tract 881.01 is the largest DAC in terms of land area but contains no residential population (residential population is located primarily in the adjacent City of Stanton) and consists of primarily industrial businesses.

Table 13-1: Disadvantaged Communities and CalEnviroScreen Percentile Scores

Census Tract	Population (2010)	Population in Garden Grove	City or Nearest City	Total Percentile Score	Pollution Indicator Score	Population Characteristics Score
891.06	3,973	Yes	Garden Grove	80	58	87
888.02	5,551	Yes	Garden Grove	75	65	73
885.01	6,785	Yes	Garden Grove	76	72	69
890.03	4,012	Yes	Garden Grove	93	82	92
881.01	2,078	No	Garden Grove	82	90	63
878.06	5,702	Yes	Anaheim	76	54	83
890.01	7,154	Yes	Santa Ana	83	75	79
879.02	6,039	No	Stanton	75	74	66
879.01	3,638	No	Stanton	76	76	67

Source: California Communities Environmental Health Screening Tool (CalEnviroScreen 3.0), Office of Environmental Health Hazard Assessment, 2017.

DEMOGRAPHICS OF GARDEN GROVE DISADVANTAGED COMMUNITIES

Two nationalities—Vietnamese (population 55,265) and Mexican (population 56,758)—compose 64.3 percent of Garden Grove's population. Populations of three DACs (891.06, 885.01, and 890.03) are majority Mexican and one DAC (888.02) majority Vietnamese. This information aids in setting the groundwork for mandated objectives and policies of the Environmental Justice Element:

- **Promoting civic engagement in the public decision-making process** within Disadvantaged Communities in the languages with which they are most comfortable

- **Prioritizing culturally sensitive improvements and programs** that address the needs of Disadvantaged Communities

Table 13-2 identifies race/ethnic categories that account for the multiracial backgrounds of Hispanic or Latino populations, which appear in the census race category as White and Some Other Race.

Exhibit ENV-2 shows that the concentration of persons of Asian heritage occurs west of Euclid Street along SR-22. The Hispanic/Latino population is concentrated in eastern Garden Grove.
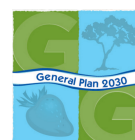
Table 13-2: Population by Race/Ethnicity

Census Tract	888.02	891.06	885.01	890.03	Citywide
Population	5,072	4,397	6,948	3,844	173,258
White alone	13.0%	5.9%	13.8%	3.3%	19.5%
Hispanic or Latino (of any race)	28.5%	**74.1%**	**53.4%**	**57.2%**	36.3%
Black or African American alone	0.0%	0.1%	0.6%	0.4%	0.9%
American Indian and Alaska Native alone	0.0%	0.0%	0.0%	0.5%	0.3%
Asian alone	**56.9%**	19.6%	30.5%	38.2%	**41.1%**
Native Hawaiian and Other Pacific Islander alone	0.1%	0.1%	0.3%	0.0%	0.3%
Some other race alone	0.4%	0.0%	0.1%	0.0%	0.1%
Two or more races	1.1%	0.2%	1.3%	0.4%	1.5%

Source: U.S. Census, American Community Survey, 2018.
Note: Majority are in bold and shaded in blue.

LANGUAGE SKILLS AND ENGLISH-SPEAKING ABILITY

Table 13-3 indicates the overall English language proficiency of Garden Grove residents. The percentages of proficiency in languages other than English is high across all DAC tracts. Significant numbers in each census tract, except one, have large pluralities or majorities who speak English less than very well. While the data consolidate Asian and Pacific Islander languages in one group, Vietnamese is the predominant language of this group. **Table 13-4** describes a subset of this population which is linguistically isolated.

Table 13-3: Population by Race/Ethnicity

Census Tract	888.02	891.06	885.01	890.03	Citywide
Population 5 years and over	4,888	4,071	6,424	3,566	162,797
English only	23.8%	11.6%	24.5%	17.4%	30.7%
Language other than English	76.2%	**88.4%**	**75.5%**	**82.6%**	69.3%
Spanish	22.0%	**69.3%**	**46.9%**	**48.2%**	28.9%
Asian and Pacific Islander languages	**53.6%**	18.3%	27.2%	34.1%	39.2%

Source: U.S. Census, American Community Survey, 2018.
Note: Majority are in bold and shaded in blue.

LINGUISTIC ISOLATION

Table 13-4 indicates linguistic isolation (limited English-speaking household) as defined by the U.S. census and as used in the CalEnviroScreen 3.0 Linguistic Isolation indicator updated using American Community Survey, or ACS (2014-2018) data. According to the census, "limited English-speaking household" is one in which no member 14 years old and over speaks a non-English language and does not speak English well. In other words, all members 14 years old and over have

at least some difficulty with English. By definition, English-only households cannot belong to this group. "All Households" indicates the proportion of households that are linguistically isolated and identifies the subgroup of language speakers who are linguistically isolated.

Four DACs have more than 20 percent of households which are linguistically isolated, with those speaking Asian and Pacific Island Language demonstrating a higher level of linguistic isolation. However, the highest linguistic isolation rate is in tract 891.06, which is predominantly Spanish speaking. Specific language information is not provided by the census at the tract level; however, the Asian population is predominantly Vietnamese.

Table 13-4: Language Isolation

Census Tract	888.02	891.06	885.01	890.03	Citywide
Households Speaking					
Spanish	21.1%	33.0%	17.5%	17.8%	23.8%
Other Indo-European languages	0.0%	54.5%	28.9%	0.0%	3.8%
Asian and Pacific Island languages	44.0%	51.8%	42.7%	45.5%	26.8%
Other languages	0.0%	0.0%	0.0%	0.0%	0.6%

Source: U.S. Census, American Community Survey, 2018.

EDUCATIONAL ATTAINMENT

Educational attainment is one of the CalEnviroScreen indicators. As **Table 13-5** indicates, tract 891.06 has a significantly lower educational attainment, with less than half the population having graduated from high school. When combined with other variables such as language isolation, these residents face significant barriers to information access and participation in City planning processes.

Table 13-5: Educational Attainment

Census Tract	888.02	891.06	885.01	890.03	Citywide
Population 25 years older	3,562	2,715	4,475	2,292	122,099
Less than High School					
Less than 9th grade	19.9%	**37.7%**	17.0%	18.5%	11.5%
9th to 12th grade, no diploma	10.9%	15.0%	12.8%	13.8%	11.7%
High school graduate or higher	69.2%	**47.3%**	70.2%	67.7%	52.1%
Bachelor's degree or higher	15.6%	**7.9%**	17.1%	13.4%	24.7%

Source: U.S. Census, American Community Survey, 2018.
Note: Highest or lowest percentage are in bold and shaded in blue.

13.3 Garden Grove Environmental Justice Challenges

Various environmental, socioeconomic, and health issues can impact environmental justice communities.

Pollution Burden

The pollution burden is calculated by measuring the average of exposure and environmental effects. The Toxic Release Inventory and Traffic Density are the pollution burdens receiving the most focus due to their higher scores and wide distribution of burden. Pollution burdens in census tract 881.01, a mostly industrial area, exceed 75 on five indicators; associated conditions affect residential neighborhoods adjoining the area. Census tract 881.01 does not include any Garden Grove residents. The pollution burden indicators of tract 881.01 are generally associated with industrial uses, hazardous waste generation, contaminated sites, solid waste facilities, groundwater cleanup sites, and emissions from proximity to freeways and truck routes.

Pollution Indicators above 75 (at the top 25 percent of the State census tracts) are noted and provided with descriptions below and summarized in **Table 13-6**.

- **Toxic Release Inventory.** Elevated levels of hazardous cancer-causing air pollutants have been found in areas where industrial facilities are sited. Accidental chemical releases can exacerbate pollution exposure and can lead to a wide variety of detrimental health problems. The indicator represents modeled air concentration of chemical releases from large facility emissions in and nearby the census tract. This indicator takes the air concentration and toxicity of the chemical to determine the toxic release score. As **Exhibit ENV-3** indicates, most of the toxic release inventory businesses are located within industrial districts within census tract 881.01 and 890.03. The impact to Disadvantaged Communities primarily affects residents living in census tract 890.03.

- **Traffic Density.** Traffic is a significant source of air pollution in urban areas, where more than 50 percent of particulate emissions come from gas-powered vehicles. The traffic density indicator represents the average traffic volumes per length of roadways. It is calculated by dividing the traffic volumes by the total road length within and 150 meters around the census tract. Three DACs (888.02, 891.06, and 890.03) are situated in close proximity to SR-22. Traffic volumes also increase near freeway interchanges at Beach Boulevard, Magnolia Street, Brookhurst Street, Euclid Avenue, and Harbor Boulevard, with some roadway segments approaching 75,000 vehicle daily trips. Exhaust from vehicles contains many toxic chemicals, including nitrogen oxides, carbon monoxide, and benzene. Traffic exhaust also plays a role in the formation of photochemical smog. Health effects of concern from these pollutants include heart and lung disease, cancer, and increased mortality.

Table 13-6: Pollution Burden Indicators Percentile Score

Census Tract	888.02	891.06	885.01	890.03	Citywide
CalEnviroScreen 3.0 Percentile Scores	75	80	76	93	81.2
Pollution Indicators	65	58	**72**	**82**	**73.4**
Toxic Release Inventory	**98**	**99**	**99**	**99**	**98.8**
Traffic Density	**93**	**93**	**89**	**91**	**86.8**
PM2.5	66	66	66	66	66.0
Groundwater Threats	44	51	51	50	57.0
Ozone	53	53	53	53	50.4
Hazardous Waste	43	10	31	66	48.6
Diesel PM	54	49	45	48	47.2
Cleanup Sites	0	30	40	55	43.4
Solid Waste Facilities	0	9	65	50	43.4
Drinking Water	46	40	40	40	40.4
Pesticides	28	0	0	15	10.8

Source: California Communities Environmental Health Screening Tool (CalEnviroScreen 3.0),Office of Environmental Health Hazard Assessment (OEHHA), 2017.
Note: 75% (highest 25% in California) score or higher shaded in blue.

- **Hazardous Waste.** Hazardous waste is potentially dangerous or harmful to human health or the environment. Potential health effects associated with living in proximity to hazardous waste processing and disposal sites include low birth rate, birth defects, and certain types of cancer. Tract 881.01 has over a dozen hazardous waste generators and businesses permitted to treat, store, and dispose of hazardous materials. Several commercial businesses, including CVS, Walgreens, Rite Aid, Costco, and Target handle and sell large quantities of hazardous materials (e.g., fertilizer, bug spray, cleaning supplies, and over-the-counter medicines), particularly businesses located on Chapman Avenue, Garden Grove Boulevard, Harbor Boulevard, and Brookhurst Street[1].

- **Cleanup Sites.** Brownfield sites containing hazardous substances are areas that suffer from environmental degradation that can lead to severe health problems. While some sites may be undergoing cleanup actions by governmental authorities or property owners, others may experience delays due to high costs, lawsuits, and concerns regarding cleanup. Tract 881.01 contains six cleanup sites (as of 2021). [2]

[1] U.S. Environmental Protection Agency (EPA), Office of Resource Conservation and Recovery, Biennial Report data, 2020.

[2] Department of Toxic Substances Control and U.S. Environmental Protection Agency (EPA) Superfund Program, 2021.

- **Groundwater Threats.** Hazardous waste storage and disposal sites can negatively impact soil, groundwater (drinking water), and air quality, leading to a wide array of negative health impacts. Tract 881.01 either contains or is within one-half mile of six underground storage tanks that store petroleum or hazardous materials.[3]

- **Solid Waste Sites and Facilities.** Old, noncompliant, or abandoned solid waste disposal sites can release waste gases such as methane and carbon dioxide for decades after site closure. Exposure to landfill leachate can have adverse impacts on reproductive and respiratory systems. Garden Grove contains five active and closed solid waste disposal sites and transfer facilities, with two in Census Tract 881.01.[4]

As **Exhibit ENV-3** shows, a concentration of Disadvantaged Communities population occurs near freeways and arterial roadways with high traffic volumes. Census tracts 891.06 and 888.02 have apartment complexes and mobile home parks along the SR-22 freeway. Census tract 890.03 has the only Disadvantaged Community near industrial businesses.

Population Characteristics

Certain population characteristics and socioeconomic factors are often related to health conditions such as asthma, low birth weight, and cardiovascular disease. In particular, socioeconomic factors such as lower educational attainment, linguistic isolation, poverty, unemployment, and housing burden are often found in populations that also have a higher risk of health conditions.

Socioeconomic factors used by CalEnviroScreen to identify Disadvantaged Communities are those often associated with low-income populations: lower educational attainment, linguistic isolation, and lower material well-being due to poverty, unemployment, and housing cost burden. Two tracts have population characteristics percentile score above 75, with tract 890.03 exceeding that score on seven of the nine indicators and tract 891.06 exceeding the score on six of nine indicators.

Exhibit ENV-4 identifies population characteristics for linguistic isolation, educational attainment, and poverty levels.

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[3] U.S. Environmental Protection Agency (EPA), Office of Underground Storage Tanks (USTs), UST Finder, 2021.
[4] Department of Resources Recycling and Recover (CalRecycle), Recycling and Disposal Reporting System, 2021.

Garden Grove's District 6 features the City's densest population of Hispanic-Americans. It is also home to the Buena Clinton neighborhood and the Buena Clinton Youth and Family Center.

- **Linguistic Isolation.** A high degree of linguistic isolation (difficulty speaking English) among members of a community can limit access to health information and public services. People with limited English abilities are less likely to receive regular medical care or mental health services. Linguistic isolation is very high in three of the four DAC tracts (888.02, 891.06, and 890.03) with percentile scores respectively of 94, 92, and 89. And, with a percentile score of 74, linguistic isolation in the fourth census tract is only somewhat less than in the others.

- **Educational Attainment.** Studies have found that adults with less education have more pollution-related health problems and are more likely to die from the effects of air pollution. Educational attainment equals or exceeds the 75-percentile score in all four tracts (888.02, 891.06, 885.01, and 890.03).

- **Low Birth Weight.** Infants born weighing less than 5.5 pounds are classified as low birth weight (LBW), a condition that is associated with increased risk of later health problems, as well as infant mortality. Nutritional status, lack of prenatal care, stress, and maternal smoking are known risk factors for LBW. Studies also suggest links with environmental exposures to lead, air pollution, toxic air contaminants, traffic pollution, pesticides, and polychlorinated biphenyls (PCBs). Understanding the baseline social and health conditions of women is a crucial component of addressing the LBW indicator. Low birth weight is above 75 in three of the four DAC tracts (888.02, 891.06, and 890.03).

- **Housing Burdened Low-Income Households.** Housing affordability is an important determinant of health and well-being. Residents of low-income households with high

housing costs may suffer adverse health impacts due to their limited ability to afford health care. The percentage of low-income households paying more than 50 percent of their income on housing is on the rise. The housing burden indicator considers the regional cost of living for both homeowners and renters and includes the cost of utilities. The Housing Element includes a robust evaluation of housing conditions and housing needs citywide and by DAC. Three of the four census tracts (888.02, 891.06, and 890.03) are housing burdened with scores above 75, and two of these in the high 90 percentile range.

- **Poverty.** Members of poor communities are more likely to be exposed to pollution and to suffer from health effects as a result of that exposure than residents of wealthier communities. Income can affect health when people cannot afford healthy living and working conditions, nutritious food, and necessary medical care. Poor communities are often located in areas with high levels of pollution. Poverty can cause stress that weakens the immune system, thus exacerbating pollution effects. Two of the four tracts (891.06 and 890.03) exceed the 75th percentile score for poverty.

- **Cardiovascular Disease.** Pollution exposure and health stresses associated with poverty can lead to acute myocardial infarction (heart attack) or other heart problems and is the leading cause of death both in California and the United States. Survivors of heart attacks and strokes are highly vulnerable to future events, especially following short- or long-term exposure to particulate matter. Cardiovascular disease score is above 75 in three tracts (891.06, 885.01, and 890.03).

Table 13-7: Pollution Burden Indicators Percentile Score

Census Tract	888.02	891.06	885.01	890.03	Citywide
Population 2010	5,551	3,973	6,785	4,012	4,480
CalEnviroScreen 3.0 Percentile Scores	75	80	76	93	81.2
Population Characteristics	73	87	69	92	76.8
Linguistic Isolation	94	92	74	89	85.0
Educational Attainment	77	89	75	90	78.0
Low Birth Weight	76	85	37	87	76.2
Housing Burden	91	90	56	86	71.8
Poverty	71	84	71	76	70.4
Cardiovascular Disease	49	89	86	89	69.4

Source: California Communities Environmental Health Screening Tool (CalEnviroScreen 3.0),Office of Environmental Health Hazard Assessment (OEHHA), 2017.
Note: 75% (highest 25% in California) score or higher shaded in blue.

Health and Wellness

Our health is shaped dramatically by community characteristics—housing, education, economic, and other social factors—which often are shaped through policy. The California Healthy Places Index (HPI) includes eight indicators representing 24 community characteristics with weighted scoring to create a single indexed HPI. In contrast to the CalEnviroScreen 3.0 data, where higher percentiles equate to worse conditions, **lower HPI percentiles equate to worse conditions.**

Garden Grove has healthier community conditions than only 40 percent of other California cities (meaning that 60 percent of other cities have healthier community conditions). **Table 13-8** identifies HPI scores for Disadvantaged Communities, Garden Grove, and Orange County.

The **Table 13-9** lists health and medical conditions as identified in the HPI. Additional conditions commonly related to physical activity are listed in the Physical Activity section. Numbers indicate the percentage of the population who report ever having been told by a doctor, nurse, or other health professional that they have the following medical conditions, unless noted.

Table 13-8: Healthy Places Index Score

Census Tract	888.02	891.06	885.01	890.03	City	Orange County
Healthy Places Index Score	27.0	24.9	27.1	28.2	40.1	75.0

Source: Healthy Places Index, 2021.

Table 13-9: Health Outcomes

Census Tract	888.02	891.06	885.01	890.03	Citywide
Arthritis	18.3%	19.5%	17.1%	15.4%	17.9%
Asthma ER Admissions (age adjusted rate of emergency department visits for asthma per 10,000)	38.0%	43.9%	46.2%	43.9%	39.7%
Cancer (except skin cancer)	4.0%	4.2%	4.1%	3.3%	4.6%
Asthma (chronic)	8.5%	8.9%	8.3%	8.5%	8.0%
Chronic Obstructive Pulmonary Disease	6.1%	6.3%	5.2%	4.9%	5.2%
Life expectancy at birth (years)	81.2%	78.6%	81.6%	77.9%	81.6%
Mental Health	13.8%	15.1%	13.2%	14.1%	12.2%
Chronic Kidney Disease	2.4%	2.8%	2.3%	2.4%	2.4%

Source: Healthy Places Index, 2021.

Economic and Food Insecurity

Poverty status is a strong determinant of food insecurity. The poverty threshold used to determine the poverty level in the U.S. is based on three times the cost of a minimum food diet in 1963, adjusted annually for inflation using the Consumer Price Index for Urban Consumers. Poverty thresholds are the same for the entire country (except Alaska and Hawaii) and are not adjusted for local cost of living; therefore, in higher cost of living areas like Orange County, official statistics may not make apparent the extent of food insecurity.

The U.S. Department of Agriculture defines food insecurity as a lack of consistent access to enough food for an active, healthy life. It is important to know that although hunger and food insecurity are closely related, they are distinct concepts. Hunger refers to a personal, physical sensation of discomfort, while food insecurity refers to a lack of available financial resources for food at the household level. Food insecurity occurs in households with incomes less than 300 percent of the federal poverty level. Per **Table 13-10**, nearly nine percent of Garden Grove residents experience food insecurity compared to four percent for Orange County as a whole.

Grocery Store Access

Limited access to supermarkets, supercenters, grocery stores, and other sources of healthy and affordable food may make it harder for some residents to eat a healthy diet. In general, most areas of Garden Grove and the DACs have access to large grocery stores. At least 20 large grocery stores (greater than 10,000 square feet in building size) are located citywide throughout and in adjacent communities, with most residents living within a one-mile distance of those grocery stores. In addition, many small ethnic and small-scale markets catering to specific cultural segments of the population can be found within or near most neighborhoods.

Park Access

Parks, playgrounds, greenways, trails, and community open spaces help keep residents fit and healthy by providing access to places that support physical activity. **Table 13-10** shows the level of self-reported physical activity of residents and people in surrounding areas, per the California Health Interview Survey. Respondents in Garden Grove indicated comparatively worse physical activity levels than residents in surrounding jurisdictions.

Access and proximity to safe places for physical activity are significant predictors of physical activity levels. Because safe spaces for physical activity are not equitably distributed, not everyone has the same opportunity to be active. Frequently, low-income communities and communities of color have more limited access to safe, well-maintained facilities that encourage physical activity.

Garden Grove has approximately 19 park and recreation facilities citywide. Many residential neighborhoods are not within a 10-minute walk of a park, including DAC tracts 888.02, 891.06, and 885.01.   See **Exhibit ENV-5** for park access and proportion of the population in disadvantage communities that are not within a 10-minute walk of a park.

Table 13-10: Health Outcomes

Food Access and Physical Activity (2016)	Orange County	Garden Grove	Westminster	Orange	Cypress
Low-income food insecurity (18+)	4.0%	8.9%	7.1%	7.0%	4.0%
Obese (BMI &age; 30) (18+)	22.5%	26.1%	22.6%	25.9%	22.5%
Regular activity (5-17)	14.5%	11.9%	12.7%	15.0%	14.5%
Walked at least 150 minutes (18+)	36.8%	35.3%	37.2%	35.4%	36.8%
Current smoker (18+)	10.5%	12.6%	12.2%	11.8%	10.5%
Sugar drink consumption 1+ times per day (18+)	7.7%	9.9%	8.5%	10.0%	7.7%

Source: AskCHIS Neighborhood Edition, California Health Interview Survey (CHIS), UCLA, 2016.

Pedestrian/Cyclist Activity and Safety

Research has found that walking and biking provide the same health benefits as engaging in more regimented daily exercise. Activity accumulated in short bursts, of a minimum of 10 minutes at a time, can achieve health benefits such as reducing mortality by 12 percent and chronic diseases by 10 percent. Pedestrian and bicyclist infrastructure provides people with safe, dedicated areas to walk and bike, which helps increase the use of active transportation and enhances residents' health.

In Garden Grove, some accidents involving pedestrians and bicycles can occur on local roadways. According to the Garden Police Department, previous accidents involving pedestrians and bicycles occurred as a result of vehicle driver distractions, speeding, or intoxicated drivers. Collision data from the Transportation Injury Mapping System, between 2010 and 2020, a concentration of vehicle collisions occurred within tracts 885.01 and 891.06 around the intersection of Garden Grove Boulevard and Harbor Boulevard. At least one pedestrian fatality was recorded near that intersection. Several pedestrian and bicycle fatalities occurred along Harbor Boulevard near SR-22. **Exhibit ENV-6** shows the location of vehicle collision concentrations. Adequate pedestrian and bicycle infrastructure, educational campaigns, proper roadway design, enforcement, and appropriate signage would help reduce accidents involving pedestrians and bicycles on local roadways. See the Circulation Element and the Garden Grove Active Streets Master Plan for goals, policies, and program recommendations related to pedestrian/cyclist activity and safety.

Safe and Sanitary Homes

Housing location, quality, affordability, and stability have health implications. Often, individuals who experience unique or compounding health risks face multiple, interrelated barriers to accessing safe, stable, and affordable housing. Over 68 percent of the housing stock in Garden Grove was built before 1960. The need for safe and sanitary homes is addressed in the Housing Element.

Environmental Justice Element Goals, Policies, and Implementation

Reduce Unique or Compounded Health Risks

Goal EJ-1:   **Reduced concentrations of pollution sources to eliminate them as unique health risks to residential neighborhoods and disadvantaged communities**

Policy EJ-1.2:   **Minimizing Pollution Burdens.** Require new residential development and encourage established residential units near industrial uses or transportation corridors to include building design features, equipment, and/or site planning measures to protect occupants from pollution.

Policy EJ-1.3:   **Roadway Air Pollution and Noise.** Mitigate impacts on residential neighborhoods immediately adjacent to SR-22 freeway from noise impacts and air pollutants from traffic and vehicle emissions, including use of landscape buffers, sound walls, and similar strategies.

Policy EJ-1.4:   **Industrial Pollution.** Reduce pollution exposure in residential neighborhoods and to sensitive receptors by limiting industrial operations or restricting polluting land uses through the Zoning Code that generate substantial quantities of hazardous materials and/or air pollutants.

Policy EJ-1.5:   **Agency Consultation.** Consult with State, federal, and Orange County agencies to assist in improving, identifying, prohibiting, enforcing, and mitigating against concentration of harmful pollution sources.

Policy EJ-1.6:   **Public Education.** Develop community programs to improve public awareness of State, regional, and local agencies resources and plans to assist with air quality and other environmental quality concerns.

ENV-IMP 1A   Consult with the California Air Resources Board and the South Coast Air Quality Management District to ensure appropriate monitoring of stationary source emissions, and to receive aid and/or assistance to reduce exposures to harmful air pollutants in disadvantaged communities.

ENV-IMP 1B   Consult with the California Department of Environmental Protection Agency and the U.S. Environmental Protection Agency to implement State and federal laws on clean air, clean water, hazardous waste and materials, solid waste, and toxic and hazardous substances.

ENV-IMP 1C   Participate in the South Coast Air Quality Management District's Community Air Monitoring Program and AB 2588 Toxic Hotspots Program.

ENV-IMP 1D   Designate acceptable and unacceptable areas for freight trucking and diesel truck idling to limit impacts on disadvantaged communities or residential areas overburdened by air pollution.

ENV-IMP 1E   All new developments must meet the requirements of the Noise Ordinance (Chapter 8.47 Noise Control) of the Garden Grove Municipal Code.

Related Goals and Policies: Refer to the Safety Element for goals and policies related to hazardous materials. Refer to the Air Quality Element for goals and policies related to air quality, air pollution, and particulate emissions. Refer to the Land Use Element for goals and policies related to land use compatibility, including reducing conflicts between residential and industrial uses.

Improving Public Services and Facilities

Goal EJ-2:   **Improved access to public facilities and services in underserved areas, disadvantaged communities and areas with lower economic and educational attainment**

Policy EJ-2.1:   **Equitable Public Improvements.** Provide equitable public improvements and community facilities to all areas of Garden Grove.

Policy EJ-2.2:   **New Park Access.** Prioritize new park and recreational facilities, including expanding opportunities for physical activity, within disadvantage communities and residential neighborhoods lacking easy, walkable access to park and recreation facilities.

Policy EJ-2.3:   **New Development.** Encourage new residential and mixed-use projects to provide publicly accessible parks, urban trail facilities, or other amenities that expand opportunities for physical activity.

Policy EJ-2.4:   **Pedestrian Street Improvements.** Enhance sidewalks and crosswalks to create safe walking conditions and easy access to public amenities and transit stops within disadvantaged communities and pedestrian priority areas.

Policy EJ-2.5:   **Neighborhood Cleanup.** Support programs and organizations that assist in cleaning up residential neighborhoods, including litter, trash, and graffiti removal.

Policy EJ-2.6:   **Tree Planting and Canopy.** Expand tree canopy coverage along public streets, within pedestrian priority areas, and around schools and parks.

Policy EJ-2.7:   **Park Improvements.** Purse park improvements at established park and recreational facilities with new and improved amenitie that meet the needs of the community.

ENV-IMP 2A   Implement the Active Street Master Plan and priorities improvements within Disadvantaged Communities.

ENV-IMP 2B   Prioritize the City's capital improvement program to address the needs of Disadvantaged Communities.

ENV-IMP 2C   Implement the Urban Forest Management Plan, including preparation of a comprehensive tree planting plan.

ENV-IMP 2D   Support conducting neighborhood cleanup programs, including volunteer programs.

ENV-IMP 2E   Consider establishing neighborhood beautification programs.

ENV-IMP 2F   Continue graffiti abatement and removal programs and graffiti reward programs.

Related Goals and Policies: Refer to the Parks, Recreation and Open Space Element for goals and policies related to parks and open space. Refer to the Conservation Element for goals and policies related to solid waste, recycling, and green building. Refer to the Circulation Element and the Garden Grove Active Streets Master Plan program for goals, policies and recommendations related to pedestrian/cyclist activity and safety.

Access to Healthy Foods

Goal EJ-3:   **Improved access to healthy food outlets for people living in underserved areas, Disadvantaged Communities, and areas with lower economic and educational attainment**

Policy EJ-3.1   **Community Gardens.** Foster the establishment of new community gardens throughout the City, including identifying unique properties that are suitable for gardens.

Policy EJ-3.2   **Urban Agriculture.** Explore opportunities for small-scale, community-supported agriculture, including partnering with community-based groups and non-profit organizations.

Policy EJ-3.3   **Healthy Food Programming.** Support food education programs and public service programming with messaging about healthy eating habits, food choices, culinary classes, nutrition, and related City programs.

Policy EJ-3.4   **Farmers' Markets**. Encourage farmers' markets to operate in Garden Grove, particularly markets that offer unique products of interest to many diverse cultures.

Policy EJ-3.5	**Small Markets.** Encourage small, ethnic grocery stores and food markets that offer healthy food options.
ENV-IMP 3A	Continue partnerships with nonprofit organizations, food pantries, food banks, and volunteer groups to prepare and distribute meals.
ENV-IMP 3B	Use the City's economic development resources to reach out to organizations and businesses interested in hosting farmers' markets and establishing unique grocery stores. Market unique farmers' market events throughout Orange County.

Civic Engagement and Community Outreach

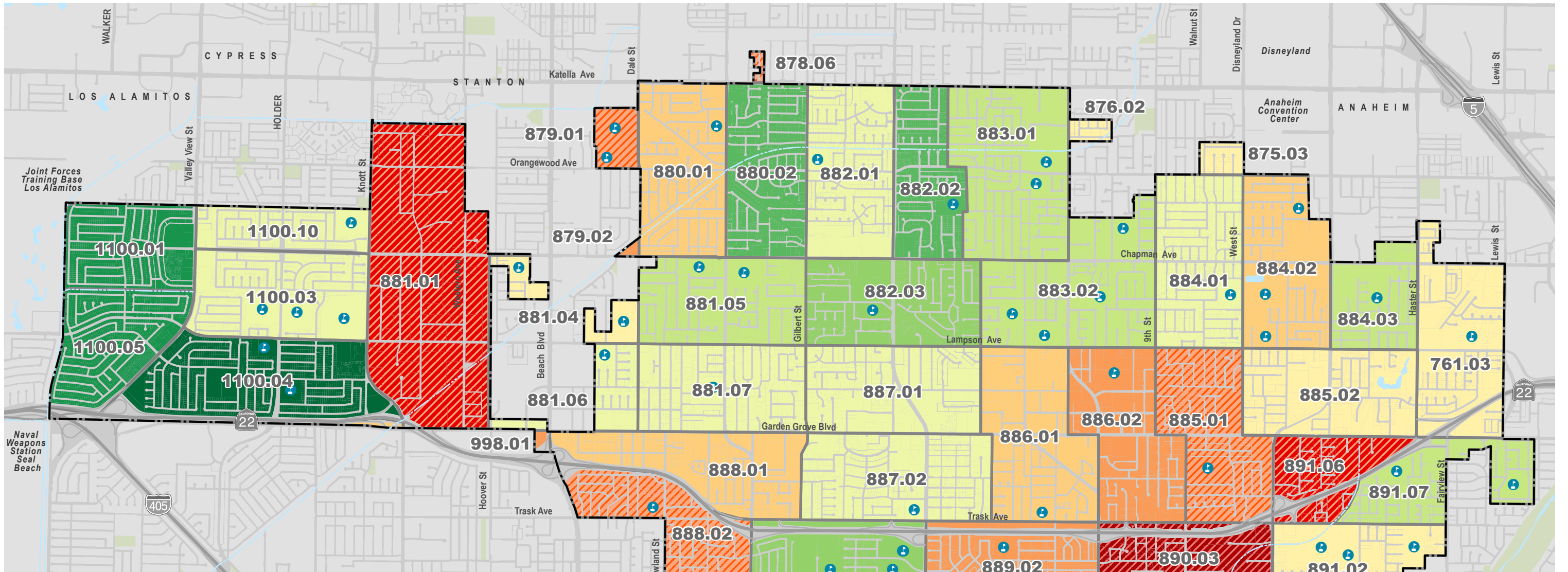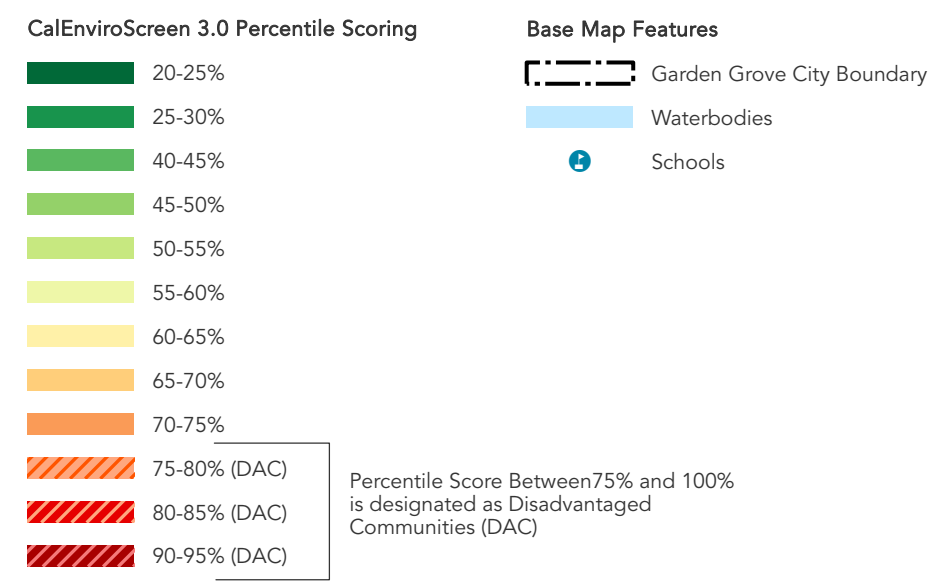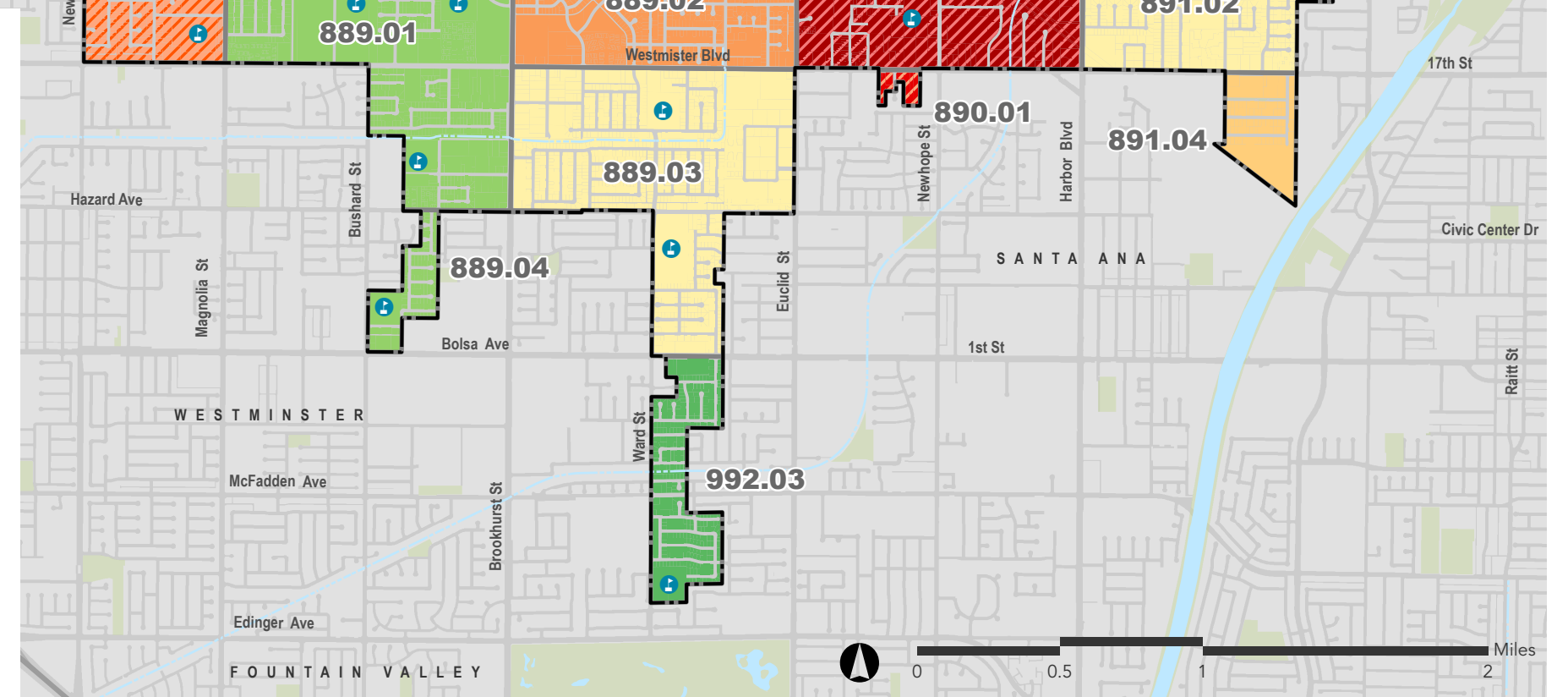| **GOAL EJ-4:**	**Increased civic engagement and community outreach, with inclusive and transparent strategies that reflect the Garden Grove community**
Policy EJ-4.1:	**Civic Engagement.** Support an equitable, transparent, and comprehensive approach to civic engagement and public outreach on all aspects of City governance and delivery of services.
Policy EJ-4.2	**Diverse Communication.** Utilize traditional and digital forms of communication in multiple languages to solicit feedback on policy decisions and major development projects.
Policy EJ-4.3	**Cultural Assets and Knowledge.** Identify and use culturally appropriate stakeholder and data analysis tools that recognize and utilize communities' cultural assets and knowledge.
Policy EJ-4.4	**Special Meetings.** Conduct special informational meetings for projects that could pose impacts on disadvantaged communities; include direct notice to tenants and property owners with project materials provided in multiple languages.
Policy EJ-4.5	**Capacity Building.** Promote capacity-building efforts (the process of improving and strengthening the skills, abilities, access, and resources) to educate and involve traditionally underrepresented populations in public decision-making processes.
ENV-IMP 4A	Establish a comprehensive Community Outreach and Public Engagement Strategy Guide that serves as a framework for all departments to participate in meaningful communication and engagement with the public, prioritizing residents in disadvantaged communities, residential neighborhoods, and those with language barriers. Identify and use instruments that help select racially and culturally appropriate public processes.

Exhibit ENV-1: Disadvantaged Communities

CalEnviroScreen 3.0 Percentile Scoring

- 20-25%
- 25-30%
- 40-45%
- 45-50%
- 50-55%
- 55-60%
- 60-65%
- 65-70%
- 70-75%
- 75-80% (DAC)
- 80-85% (DAC)
- 90-95% (DAC)

Percentile Score Between 75% and 100% is designated as Disadvantaged Communities (DAC)

Base Map Features

- Garden Grove City Boundary
- Waterbodies
- Schools

Source: CalEnviroScreen 3.0 (Disadvantaged Communities) and MIG, 2021.

Exhibit ENV-2: Race and Ethnicity

Hispanic/Latino Population
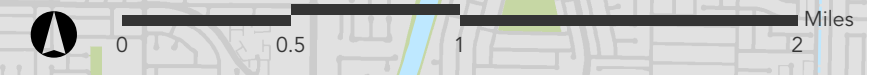50% to 75% of Population

Asian Population
50% to 75% of Population

No other census tracts include a race/ethnicity that is greater than 50% of the census tract population.

Disadvantaged Communities
Disadvantaged Communities

Base Map Features
Garden Grove City Boundary
Waterbodies
Schools

Source: CalEnviroScreen 3.0 (Disadvantaged Communities), 2017.

0   0.5   1   2 Miles

Exhibit ENV-3: Pollution Burdens

Pollution Burdens (1,000 ft Buffer)

- Toxic Release Inventory
- Large Quanitities Generator (Hazardous Materials)

Traffic Density

- Freeway (1,000 ft Buffer)

Arterials Average Daily Traffic (500 ft Buffer)

- 5,000 - 10,000
- 10,001 - 25,000
- 25,001 - 45,000
- 45,001 - 65,000
- 65,001 - 75,000

Disadvantaged Communities

- Disadvantaged Communities

Number of Persons in Disadvantaged Communities

Number of Persons per Parcel

- 1 - 10
- 11 - 100
- 101 - 200
- 201 - 300
- 301 - 400
- 401 - 500

Race/Ethnicity Majority (2018)

- Asian Majority Population (40 to 50%)
- Hispanic/Latino Majority Population (40 to 70%)

Source: U.S. EPA (TRI and Hazardous Material); UrbanFootprint (Population); CalEnviroScreen 3.0 (Disadvantaged Communities and Race/Ethnicity); OCTA (Traffic Density), 2014 to 2018; and MIG, 2021.
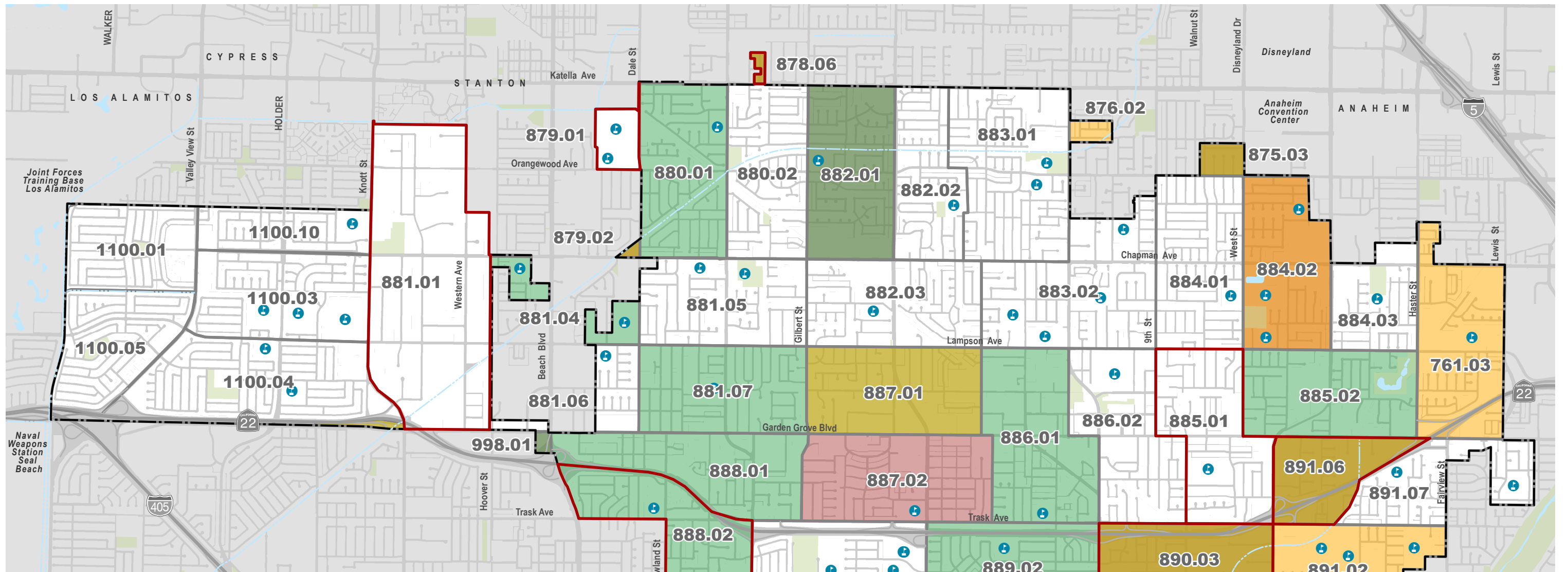
0   0.5   1   2 Miles

Exhibit ENV-4: Population Characteristics

Population Characteristics

Educational Attainment

30.1% - 50.4%

Percent of population over 25 years of age not having completed high school.

Linguistic Isolation

20.1% - 36.5%

Percentage of limited English speaking households.

Poverty

50.1% - 64.5%

Percent of population living below twice the Federal poverty level.

Disadvantaged Communities

Disadvantaged Communities

Base Map Features

Garden Grove City Boundary

Waterbodies

Schools
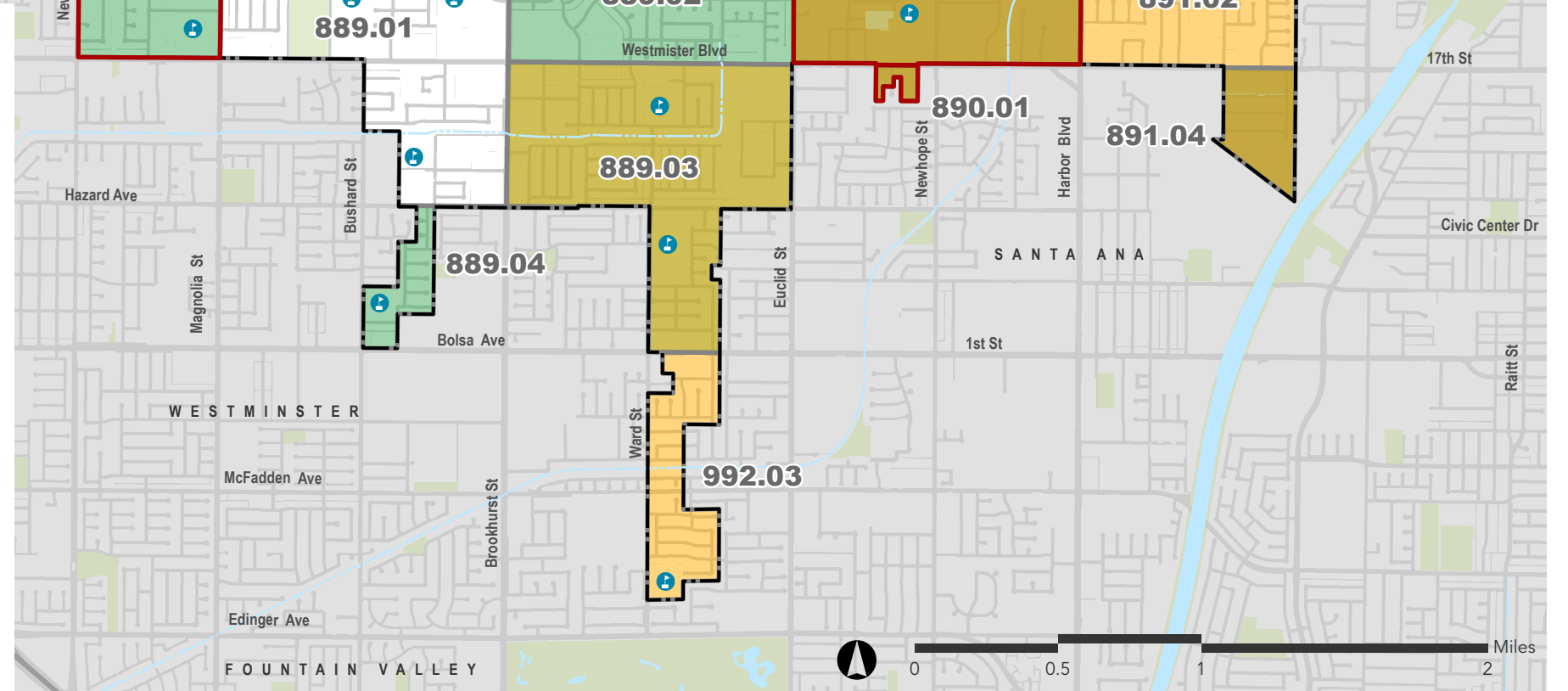
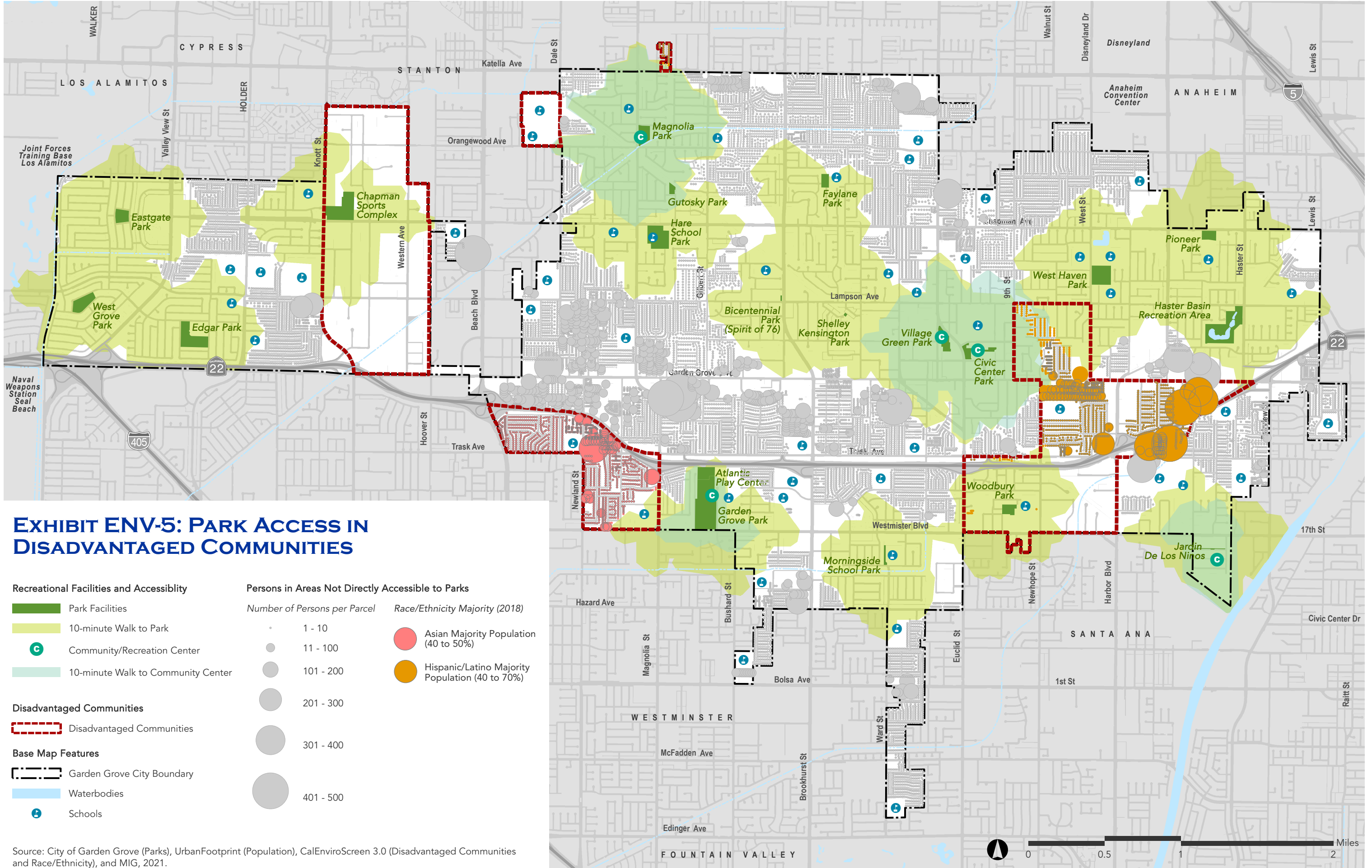Source: CalEnviroScreen 3.0 (Disadvantaged Communities) and MIG, 2021.

Exhibit ENV-5: Park Access in Disadvantaged Communities

Recreational Facilities and Accessiblity

- Park Facilities
- 10-minute Walk to Park
- **C** Community/Recreation Center
- 10-minute Walk to Community Center

Disadvantaged Communities

- Disadvantaged Communities

Base Map Features

- Garden Grove City Boundary
- Waterbodies
- Schools

Persons in Areas Not Directly Accessible to Parks

Number of Persons per Parcel

- 1 - 10
- 11 - 100
- 101 - 200
- 201 - 300
- 301 - 400
- 401 - 500

Race/Ethnicity Majority (2018)

- Asian Majority Population (40 to 50%)
- Hispanic/Latino Majority Population (40 to 70%)

Source: City of Garden Grove (Parks), UrbanFootprint (Population), CalEnviroScreen 3.0 (Disadvantaged Communities and Race/Ethnicity), and MIG, 2021.
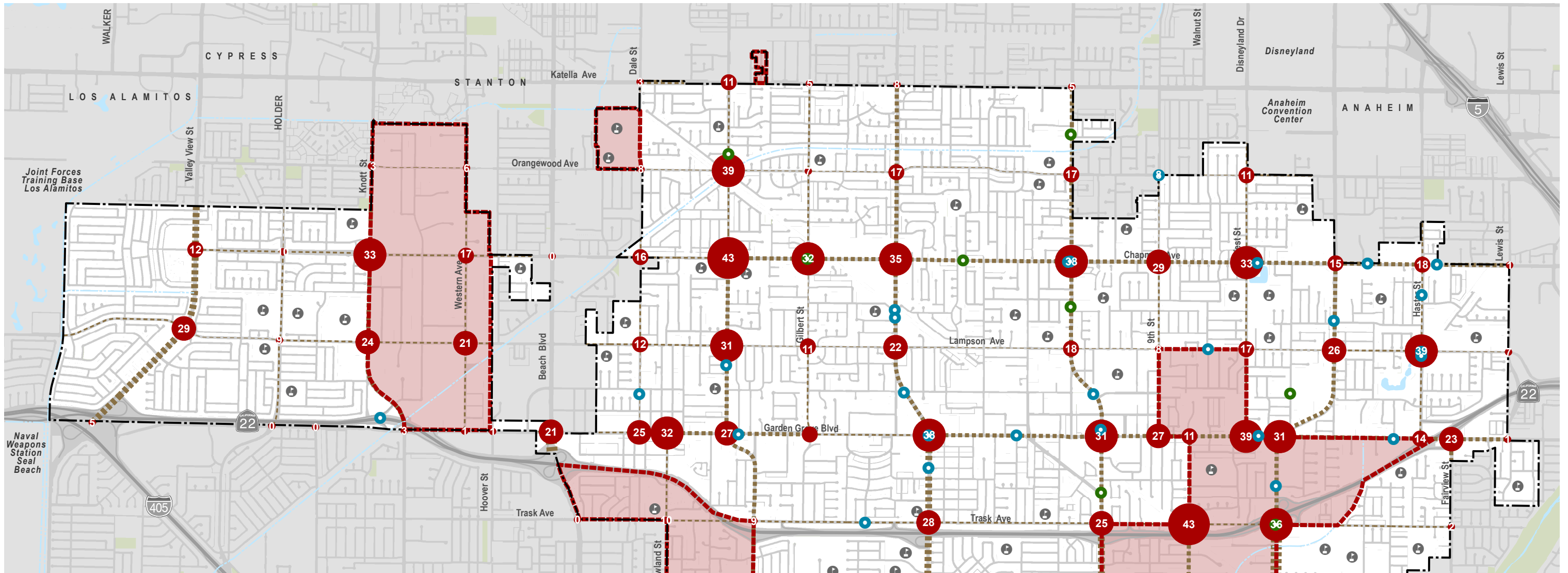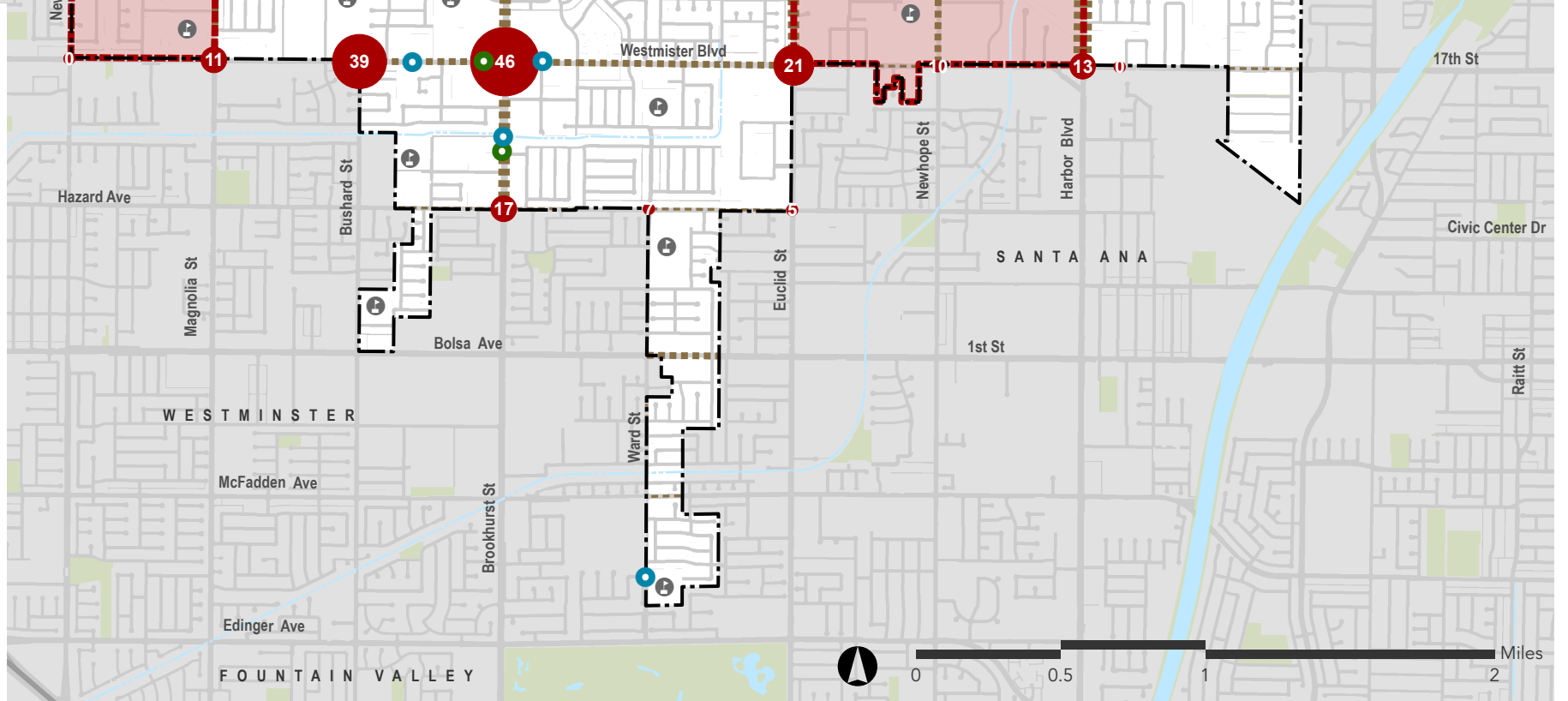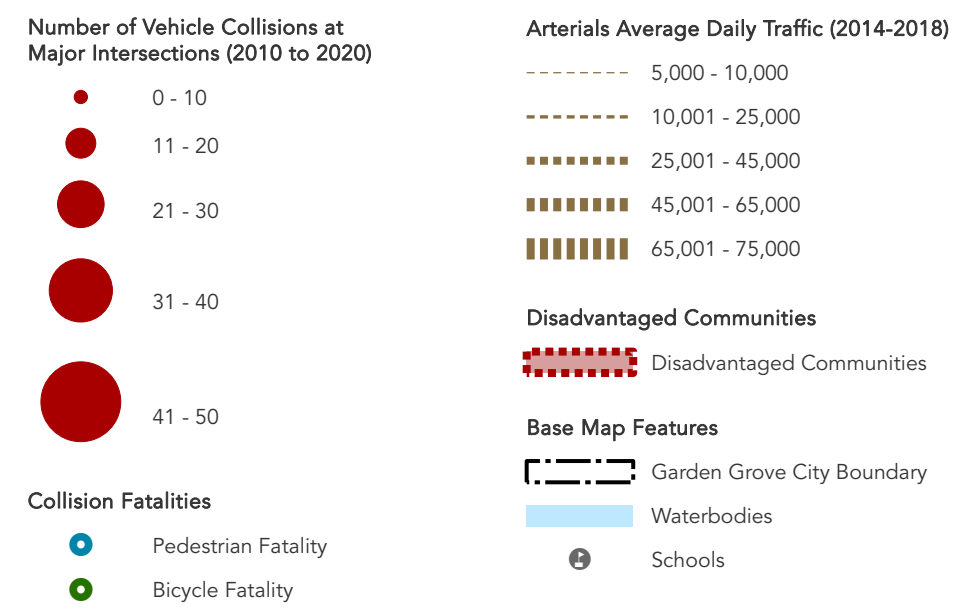
Exhibit ENV-6: Vehicle Collisions

Number of Vehicle Collisions at Major Intersections (2010 to 2020)

- 0 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50

Arterials Average Daily Traffic (2014-2018)

- 5,000 - 10,000
- 10,001 - 25,000
- 25,001 - 45,000
- 45,001 - 65,000
- 65,001 - 75,000

Disadvantaged Communities

- Disadvantaged Communities

Base Map Features

- Garden Grove City Boundary
- Waterbodies
- Schools

Collision Fatalities

- Pedestrian Fatality
- Bicycle Fatality

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2021