6

Community Justice and Enviromental Justice

Environmental justice (EJ) and public health concerns, including pollution and compounded health risks stemming from the concentration of landfills, refineries, and other industrial activities in and nearby the city, have a long history in Carson that predates its incorporation as an independent city in 1968. In recent years, the City has made significant strides in remediating landfills and working to attract new opportunities that help achieve a cleaner, more livable future. However, many areas in the city remain impacted by legacy and ongoing air pollution and ground-contamination concerns. Furthermore, a complex history of past regional and local discriminatory policies and socioeconomic inequities have exacerbated disproportionate burdens and led to disparities in access to opportunities that have substantial implications in a racially and ethnically diverse city like Carson.

As Carson evolves from a predominantly industrial area and suburban community into a complete city with a balanced mix of diverse neighborhoods, jobs, recreation, retail, and services, the City is committed to ensuring this transition is equitable and supports community health and good quality of life for all residents. This element has a targeted focus on the various aspects that influence community health, measured by social determinants of health and health outcomes that characterize existing disparities and inequities in the city, and addresses these through cross-cutting goals and policies to ensure that the City is equipped to adapt and respond to various social, economic, and environmental forces over time.

Policies in this element are informed by technical analysis and outreach conducted for the General Plan, as well as focused outreach specific to community health and EJ.

RELATIONSHIP TO STATE LAW

Senate Bill 1000 (SB 1000, which is an amendment to Section 65302 of the California Government Code) requires local jurisdictions with disadvantaged communities to include an Environmental Justice Element or related goals, policies, and objectives in their general plans that:

- Reduce pollution exposure;
- Reduce unique or compounded health risks;
- Promote public facilities;
- Promote physical activity;
- Promote food access;
- Promote safe and sanitary homes;
- Promote civic engagement; and
- Prioritize the needs of disadvantaged communities.

SB 1000 defines "disadvantaged communities" (DACs) as an area identified by the California Environmental Protection Agency (CalEPA) or a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation. A "low-income area" is defined as either: (1) an area with household income at or below 80 percent of the statewide median income, or (2) an area with household incomes at or below the threshold designated as low-income by the Department of Housing and Community Development's (HCD) list of state income limits.

Senate Bill 535 (SB 535) gave CalEPA the responsibility for formally identifying DACs, which led to the development of the California Communities Environmental Health Screening Tool (CalEnviroScreen). The most current version is known as CalEnviroScreen 4.0, which was released in October 2021 and includes 21 indicators that assess the pollution burden and population characteristics of all census tracts in the state to identify those most vulnerable to pollution and its effects. In May 2022, CalEPA correspondingly updated the designation of SB 535 DACs, which include census tracts with cumulative CalEnviroScreen 4.0 scores in the top 25th percentile in the state (i.e., with a score of 75 or greater), tracts that were previously designated SB 535 (2017) DACs based on CalEnviroScreen 3.0, and those that have high CalEnviroScreen 4.0 pollution burden scores but low population counts. SB 535 DACs are the standard used by State agencies and must be considered in the General Plan. They are also a powerful lever to access funds from the State Cap-and-Trade Program to benefit DACs.

Out of the 26 census tracts that intersect with the Planning Area, 22 census tracts are DACs (2022). In accordance with State law, this means that an Environmental Justice Element or equivalent goals, policies, and objectives are required for Carson. It is noted that three of the 26 census tracts are outside city limits but overlap the Sphere of Influence (SOI), and two census tracts intersect with the

city but are almost entirely outside the Planning Area, as seen in Figure 6-1. Nevertheless, because environmental justice issues are not necessarily limited by jurisdictional boundaries, these tracts are included in the analysis in the following sections.

RELATIONSHIP TO GUIDING PRINCIPLES

The Community Health and Environmental Justice Element (CHE) seeks to take a comprehensive approach to addressing the needs of DACs and providing a healthy community for all residents. As such, it includes aspects of nearly all of the core values of the Carson General Plan guiding principles but most closely furthers:

- **Guiding Principle 1:** Embrace development and technology that fosters an adaptable, modern city.
- **Guiding Principle 2:** Promote vibrant, safe, and walkable mixed-use districts and neighborhoods, and revitalized corridors.
- **Guiding Principle 3:** Provide a diverse array of housing types to meet the needs of all segments of the community.
- **Guiding Principle 4:** Support a diversified economy with a range of employment opportunities for all residents, a fiscally-sound local government, and investment in infrastructure.
- **Guiding Principle 6:** Foster harmony between industrial and residential land uses.
- **Guiding Principle 7:** Improve public health and sustainability.
- **Guiding Principle 8:** Promote development of a cohesive open space system.
- **Guiding Principle 10:** Emphasize a diversity of transportation modes and choices.

6.1 Community Health

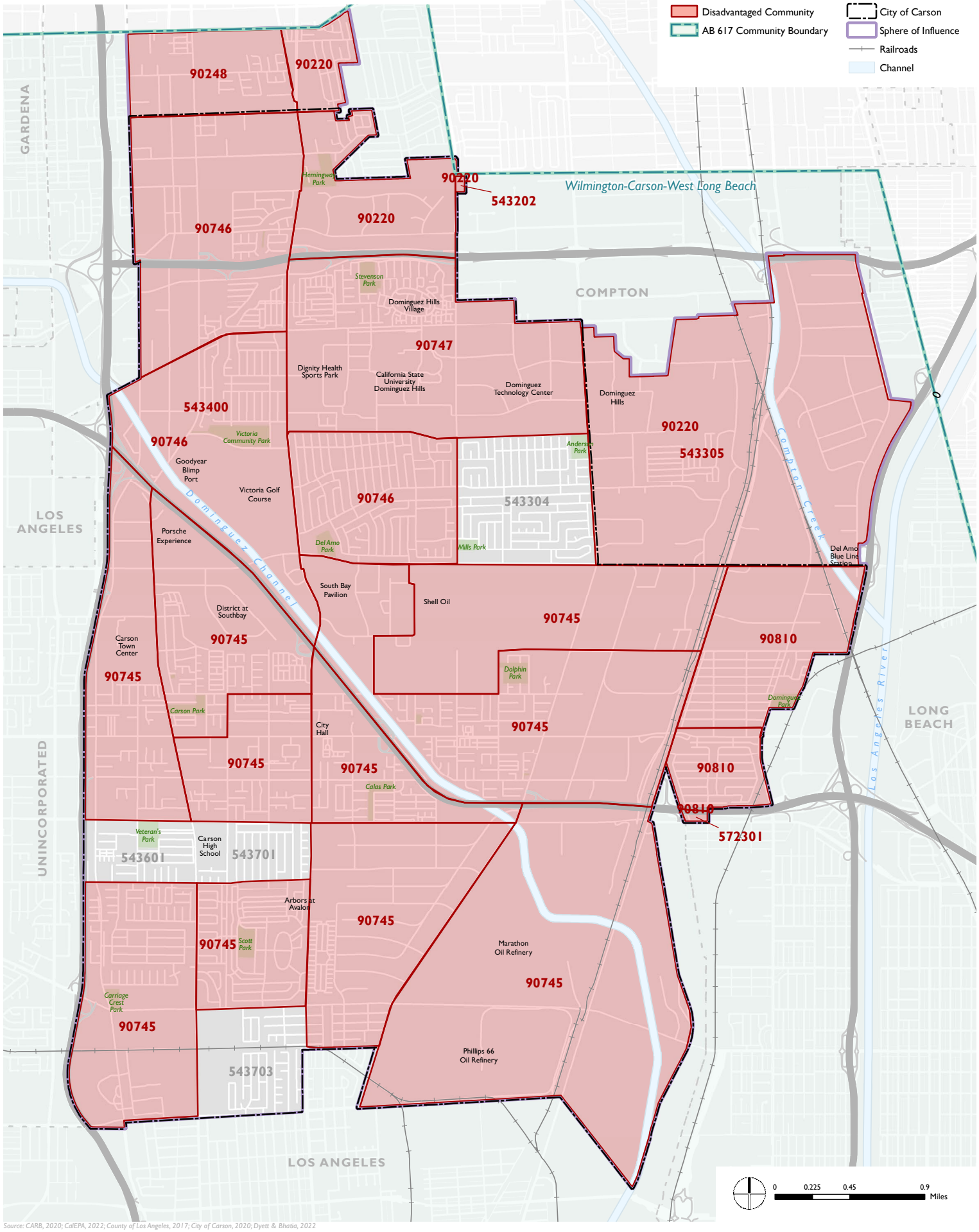
The State Office of Planning and Research (OPR) General Plan Guidelines for an environmental justice element recommend that jurisdictions undertake an additional screening process to capture EJ communities that may not have been identified in the statewide analysis (CalEnviroScreen) by using local data. The recommended process includes mapping DACs in the Planning Area, mapping low-income census tracts by the two definitions given in SB 1000, and incorporating community-specific data to examine additional pollution burden. This section follows this framework and considers factors including race and health outcomes that were not assessed at the state level.

CALENVIROSCREEN DISADVANTAGED COMMUNITIES

Nearly all of the census tracts in the Planning Area are DACs that have an overall CalEnviroScreen score of 75 or above, meaning they are among the top 25 percent most vulnerable and burdened by pollution in the state. Conversely, only four census tracts are not formally identified as DACs. As seen in Figure 6-1, these include the tract east of Wilmington Avenue just north of the Shell property, tracts at the western edge of the city between 223rd and 228th streets west of Avalon Boulevard, and the tract at the southern edge of the city south of Sepulveda Boulevard east of the County Sanitation District facility. The CalEnviroScreen 4.0 scores of these tracts range between 68 and 71 and still have fairly high scores relative to the state, with a pollution burden score ranging between 54 and 82 and a population characteristics score between 50 and 67.

It is noted that two census tracts that are SB 535 DACs do not have any population and therefore do not have a population characteristics score. These include the industrial areas comprised of the Shell, Marathon, and Phillips 66 oil refineries and adjacent industrial uses. However, the pollution burden scores of these tracts are among the top 3rd percentile in the state, and these facilities represent some of the largest employers in the vicinity, meaning people who work in these tracts as well as residents living nearby are impacted by these pollution burdens.

Figure 6-1 SB 535 Disadvantaged Communities



Source: CARB, 2020; CalEPA, 2022; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2022

LOW-INCOME AREAS

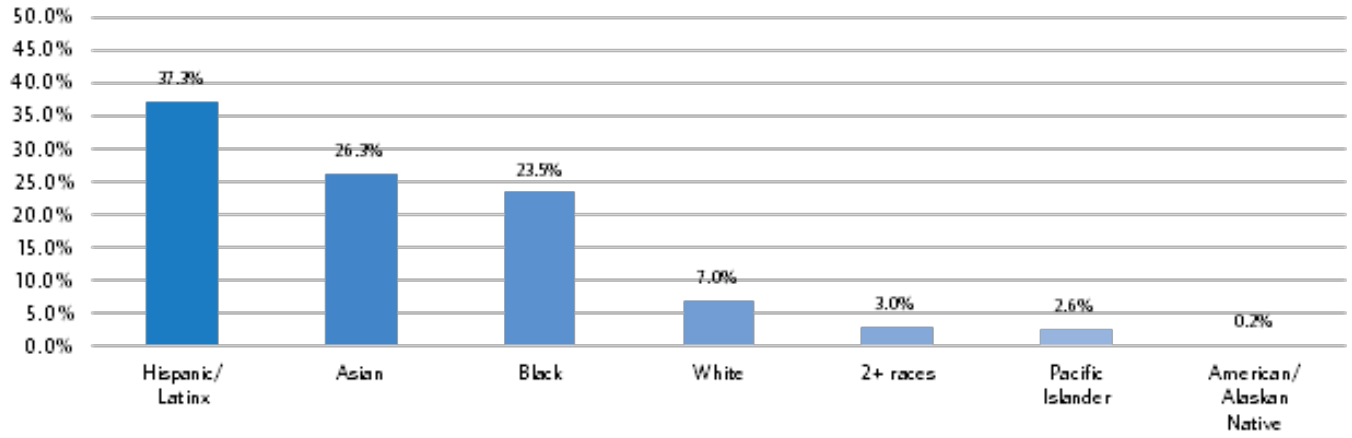
As discussed in the introductory section of this chapter, there are two definitions for low-income areas given in SB 1000, which differ based on the source used to set the threshold for identifying low-income areas. The state median income, based on the U.S. Department of Housing and Urban Development (HUD) Income Limits for 2019, is $82,200 and 80 percent of this value is $65,760; a census tract with a median household income at or below $65,760 is a low-income area by this definition. Based on the 2019 State Income Limits set by HCD, the Los Angeles County Area Median Income (AMI) is $73,100 - lower than the statewide median. Typically, the low-income threshold is 80 percent of the AMI; however, adjustments were made for Los Angeles County to account for unusually high or low family income, uneven housing-cost-to-income relationships, or other reasons determined by HUD or HCD. As a result, the low-income threshold is $83,500; a census tract with a median household income at or below $83,500 is a low-income area by this second definition.

Figure 6-2 maps the two definitions of low-income areas in Carson. Census tracts shown in pink hatch are low-income areas by the statewide median definition, which captures far fewer tracts than the low-income definition according to HCD. Many parts of the city are low-income areas, including tracts along I-405, in the downtown Core area, and in the northern- and easternmost portions of the city, including the SOI. On the other hand, areas that are not low-income include one moderate- and five above-moderate-income tracts (as defined by HCD) that are generally located around the California State University at Dominguez Hills (CSUDH) campus and in the southwest corner of the city. There is an approximately $68,140 gap between the tract with the highest and lowest median household incomes.

RACIAL/ETHNIC MAKEUP

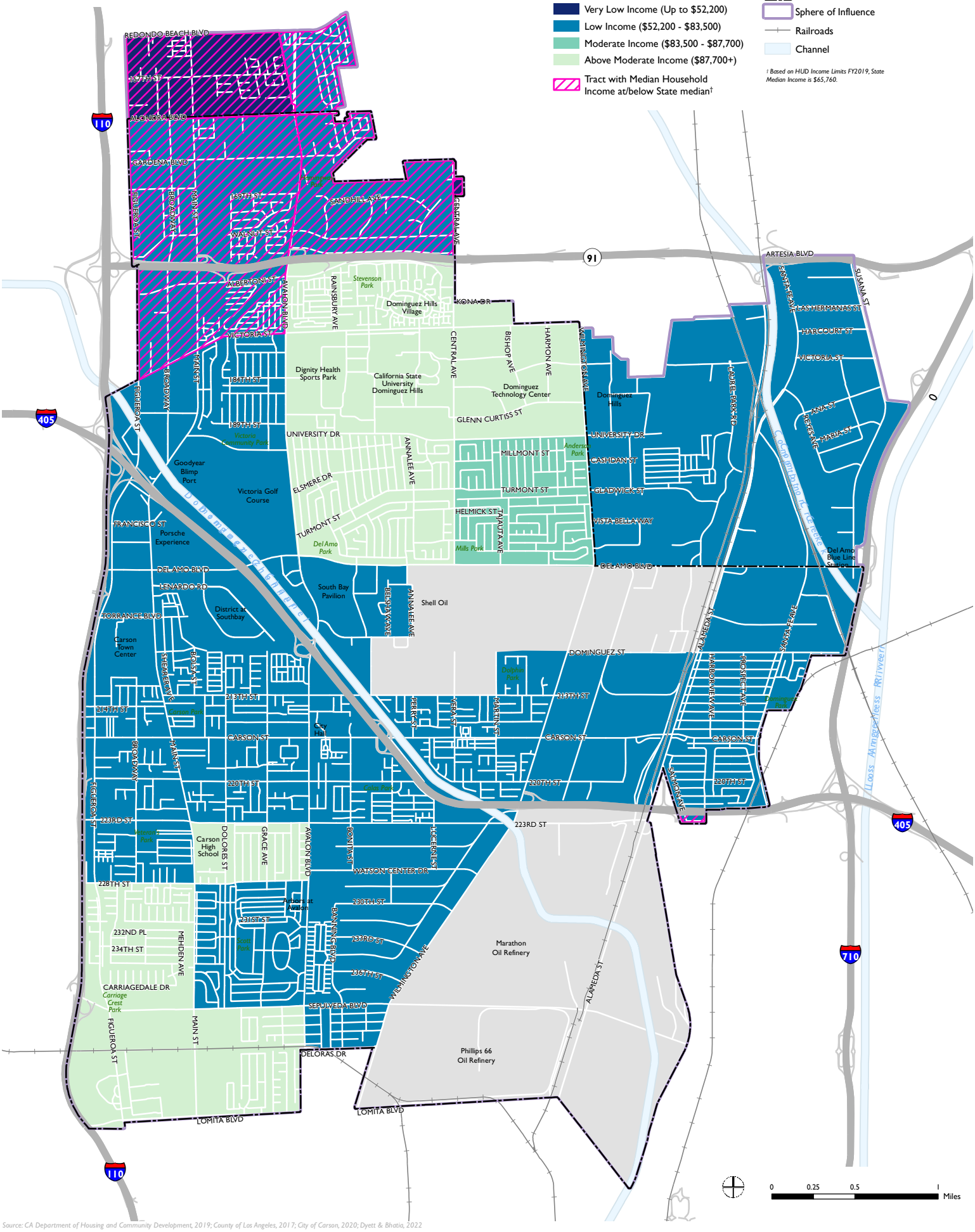
Carson is a racially and ethnically diverse place, with 93 percent of the population from non-White racial groups. The largest category is Hispanic/Latinx (37 percent), followed by Asian (26 percent) and Black racial groups (23 percent). Distribution of race in Carson is summarized in Chart 6-1. As demonstrated in Figure 6-3, which shows one dot per person by census block group from 2018 Census data, there are larger concentrations of a particular racial group in a certain area, meaning neighborhoods in Carson tend to be spatially segregated along racial lines. Furthermore, some of these areas overlap with low-income areas, such as most of the Core area, neighborhoods west of the Marathon and Phillips 66 oil refineries, the Lincoln Village area, the neighborhood west of Dignity Health Sports Park, and the residential areas at the northernmost edge of the city and SOI.

CHART 6-1: CITY OF CARSON POPULATION, 2019 BY RACE



Source: American Community Survey 5-Year Estimates, 2015-2019

Figure 6-2 Median Household Income by Tract



Source: CA Department of Housing and Community Development, 2019; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2022

Figure 6-3 also shows the general distribution of population density in the city, which is predominantly concentrated in the pockets of single-family residential neighborhoods between University Drive and Del Amo Boulevard, in the Core area extending from Carson Street and Avalon Boulevard to the southern and western City Limits, in the Lincoln Village area, and adjacent to Dignity Health Sports Park. It is noted that some of the data discussed in the sections below may show areas of the city that have high rates of a certain outcome (e.g., rates of diabetes among the adult population in a census tract), but these places may correspond to areas with low population density. This means that the overall number of individuals affected may actually be less than an area with a lower rate but higher population density.

NEGATIVE HEALTH OUTCOMES

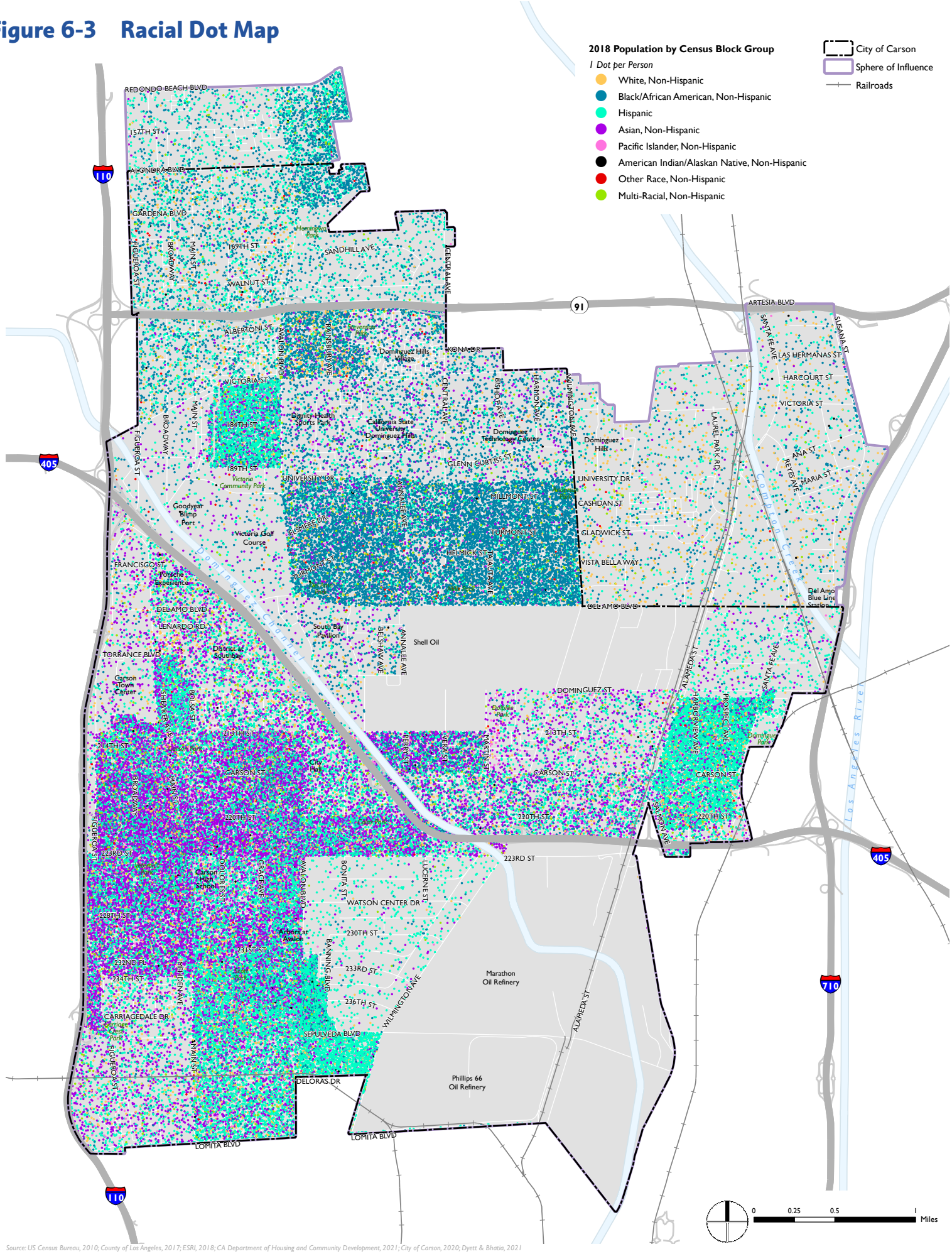
Life expectancy is one of the most basic measures of community health and can differ greatly based on a multitude of factors such as a person's physical environment, their individual socioeconomic characteristics, and lifestyles. In Carson, the average life expectancy at birth is about 79 years, which is slightly shorter than the state and the county averages (both 81 years).[1] Life expectancy also varies throughout the city, as shown in Figure 6-4; there is a difference of more than 10 years between the tract with the longest and shortest life expectancies. Comparing Figure 6-2 to Figure 6-4 shows that spatial variation in life expectancy is similar to the pattern of differences in income.

Likewise, other negative health outcomes also differ throughout the city and indicate that there are health disparities present in Carson. Figure 6-5 shows the crude prevalence of adults (18 and older) who have coronary heart disease by census tract, based on the Centers for Disease Control and Prevention (CDC) PLACES: Local Data for Better Health dataset from 2021.[2] Many tracts in the city have a higher rate of coronary heart disease than half of the census tracts in the state, and the tracts with the highest percent of adults with coronary heart disease (in darkest blue in Figure 6-5) also tend to be low-income areas. Similarly, there is a clear difference in adult populations with asthma in the city seen in Figure 6-6; the highest prevalence of asthma among adults is primarily concentrated the northern half of the Planning Area, while tracts in the southwestern quadrant of the city tends to have the lowest rate of adult asthma in the city. Moreover, several census tracts with high asthma rates intersect with pollution exposure, as described in the following section.

1 National Center for Health Statistics, U.S. Small-Area Life Expectancy Estimates Project (USALEEP): Life Expectancy Estimates File for California, 2010-2015, 2018. Available at: https://www.cdc.gov/nchs/nvss/usaleep/usaleep.html. Accessed September 2021.

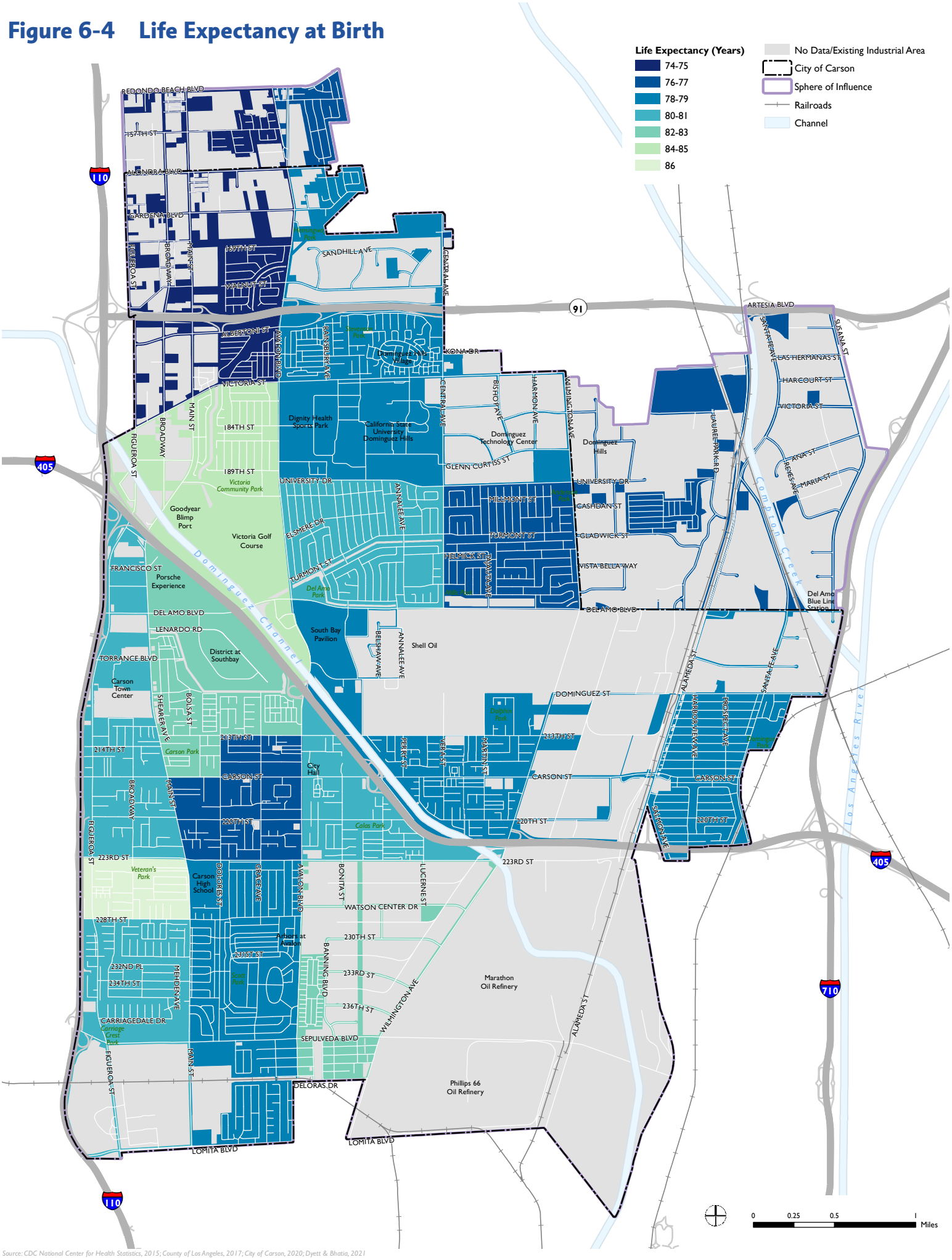
2 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2018. Atlanta, GA: US Department of Health and Human Services, CDC. Available at: https://www.cdc.gov/places/measure-definitions/health-outcomes/index.html. Accessed September 2021.

Figure 6-3 Racial Dot Map



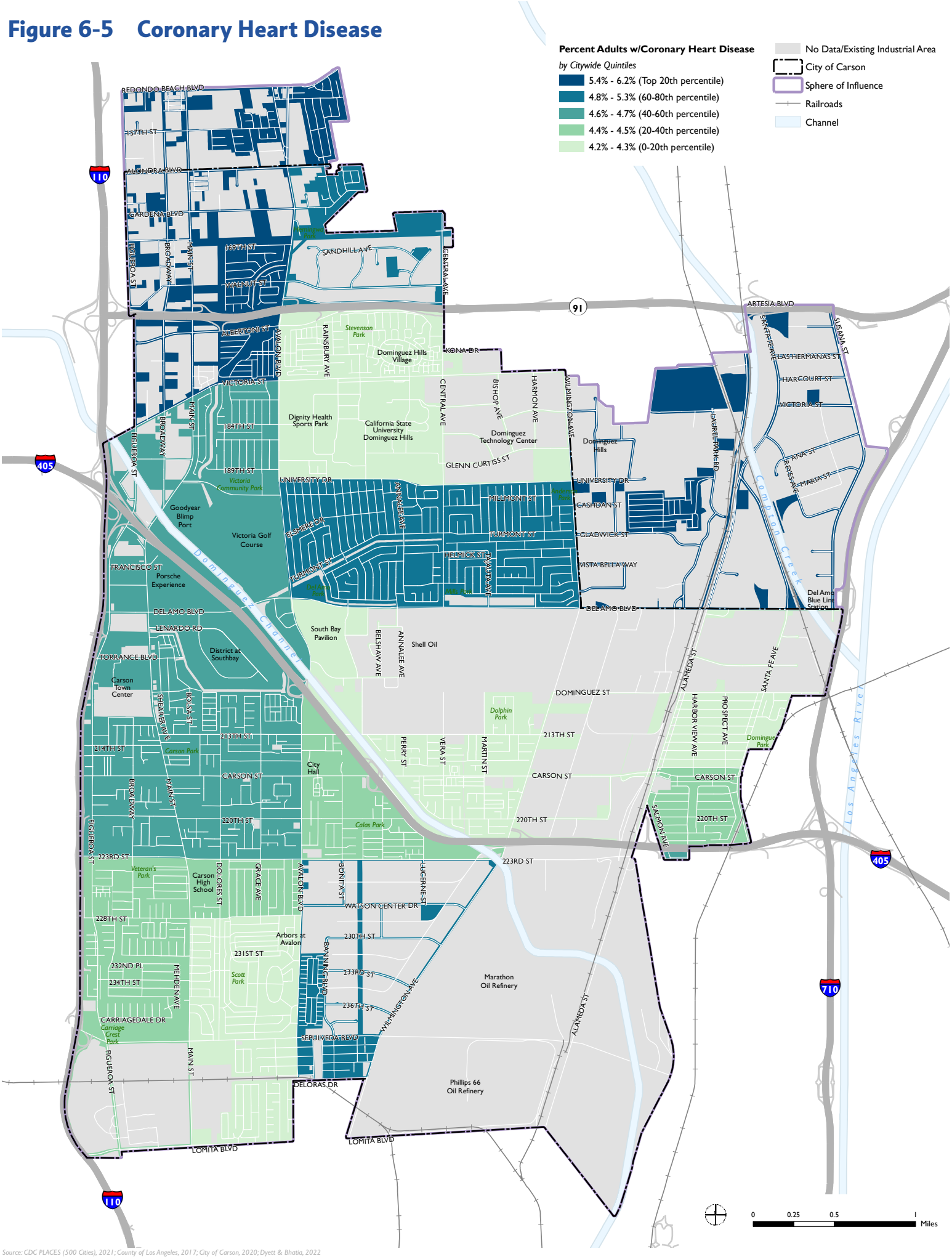
Source: US Census Bureau, 2010; County of Los Angeles, 2017; ESRI, 2018; CA Department of Housing and Community Development, 2021; City of Carson, 2020; Dyett & Bhatia, 2021

Figure 6-4 Life Expectancy at Birth



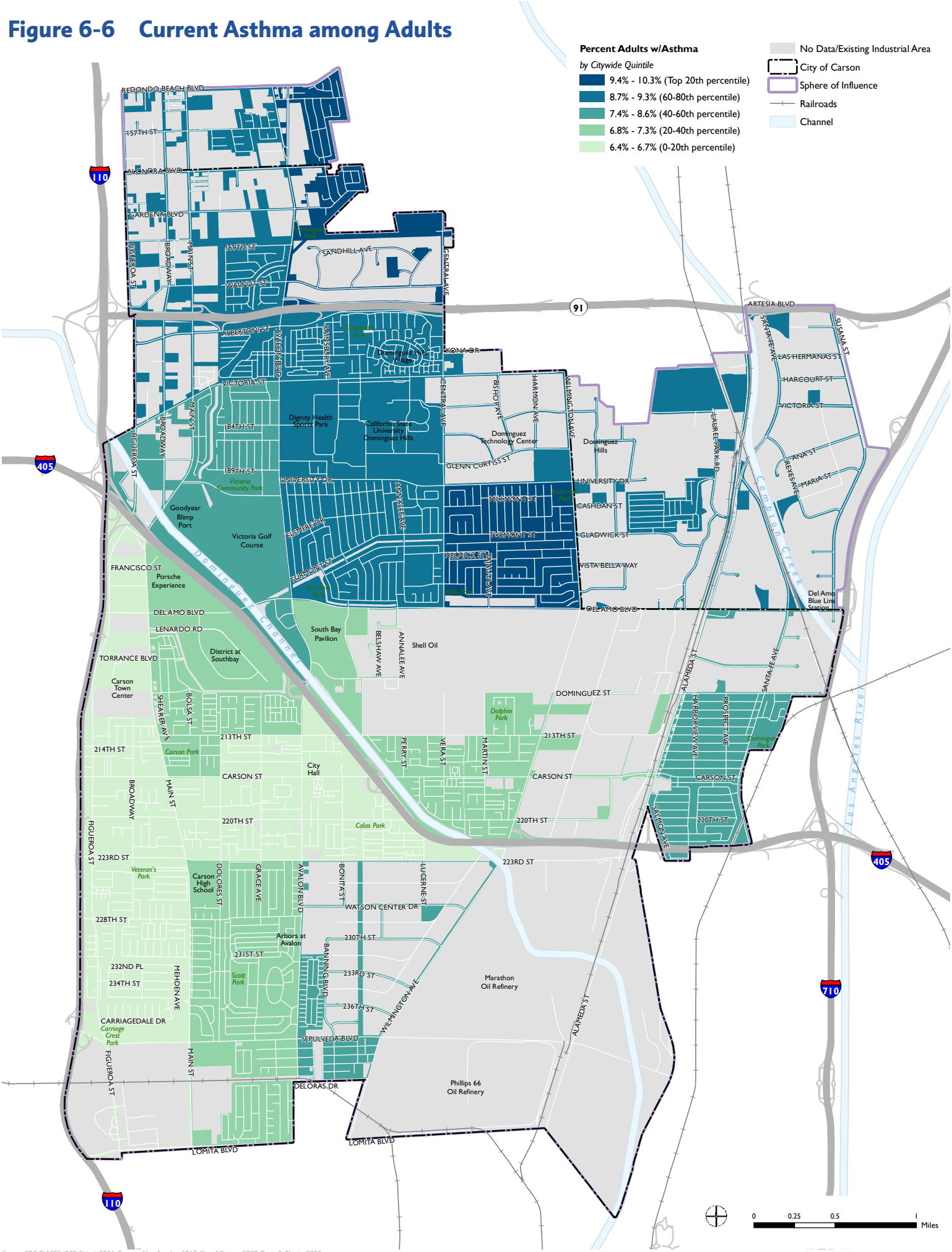
Source: CDC National Center for Health Statistics, 2015; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2021

Figure 6-5 Coronary Heart Disease



Source: CDC PLACES (500 Cities), 2021; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2022

Figure 6-6 Current Asthma among Adults



Source: CDC PLACES (500 Cities), 2021; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2022

6.2 Pollution Exposure

Direct exposure to contaminants in air, water, food, and soil can have serious health impacts including development or worsening of chronic diseases and illnesses that can lead to higher healthcare costs and inability to work or go to school, particularly when exposed for long periods of time. Reducing these health risks and compounded effects of environmental factors with other social determinants of health can significantly improve quality of life.

AIR QUALITY

Air quality and air pollution are some of the most pressing environmental issues in the city. Air pollutants are generally split into three categories:

- **Criteria air pollutants**—including ground-level ozone, particulate matter (PM), carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide—harm health and the environment and are regulated by the U.S. Environmental Protection Agency (EPA) by setting acceptable concentration levels for ambient air.
- **Toxic air contaminants**—including benzene, asbestos, arsenic, chloroform, and diesel PM—are air pollutants that can cause serious health effects from exposures at extremely low levels such that a safe level may not even exist.
- **Greenhouse gases (GHGs)**—including carbon dioxide, methane, nitrous oxide, and water vapor—are generally produced by humans and are a major contributor to global warming.

Air quality in Carson is heavily impacted by its industrial context. Concentration of industrial uses such as refineries and oil drilling, in addition to truck traffic from the ports of Los Angeles and Long Beach, result in higher concentrations of air pollutants throughout the city. This is evident by the toxic releases from facilities CalEnviroScreen indicator, which scores all census tracts in the Planning Area among the top 3rd highest percentile scores in the state. Figure 6-7 also shows how tracts in the northwest and southeast corners of the Planning Area have the highest concentrations at a local scale. Similarly, all tracts in the Planning Area have higher diesel PM scores than half of the state according to CalEnviroScreen. Figure 6-8 demonstrates the severity of diesel PM concentration in relation to truck traffic throughout the Planning Area, which is greatest in tracts that contain multiple truck routes and freeways.

ASSEMBLY BILL 617

Assembly Bill (AB) 617 addresses disproportionate impacts of air pollution by investing resources and enforcing focused actions in EJ communities as a step toward environmental equity. In response to this legislation, California Air Resources Board (CARB) established the Community Air Protection Program, under which the Wilmington-Carson-West Long Beach (WCWLB) Community was one of the first 10 communities in the state to be selected for development of a Community Emissions Reduction Plan (CERP). Adopted by South Coast Air Quality Management District (SCAQMD) in 2019, the WCWLB CERP includes 18 actions and 43 goals related to priorities that were identified by the Community Steering Committee, which include: Refineries; Ports; Neighborhood truck traffic; Oil drilling and production; Railyards; and Schools, childcare centers, and homes.[3] The CERP also sets emissions reduction targets for the milestone year 2029, as shown in Table 6-1.

3 South Coast Air Quality Management District, Annual Progress Report for AB 617 Community Emissions Reductions Plans 2019-2020, September 2019. Available at: http://www.aqmd.gov/docs/default-source/ab-617-ab-134/2020-progress-report.pdf?sfvrsn=10. Accessed September 2021.

Implementation of the Community Air Monitoring Plan (CAMP) supports and tracks air quality actions from the CERP to assess progress toward the emissions reductions targets. It works in conjunction with CERP objectives to reduce exposure for sensitive receptors such as schools and childcare centers, as well as homes near pollution sources, through strategies such as securing funding for air filtration systems at schools. There are two air monitoring locations in areas of concern near Carson, as mapped in Figure 6-9. This map also shows the CalEnviroScreen indicator score for PM 2.5, or very fine particles 2.5 micrometers or smaller in diameter, which is a criteria air pollutant monitored at these CAMP monitoring locations. CalEnviroScreen scores for PM 2.5 range from 67 to 90, and more than half of census tracts in the Planning Area (in the northeastern half) have PM 2.5 concentrations that exceed both national and state ambient air quality standards (12 micrograms per cubic meter).

WATER QUALITY

In 2012, the Human Right to Water (AB 685) established the right of every human being to have safe, clean, affordable, and accessible water adequate for consumption, cooking, and sanitary purposes. While drinking water con-

TABLE 6-1: EMISSIONS REDUCTION TARGETS, WILMINGTON-CARSON-WEST LONG BEACH

Air Pollutant	*Reduction Target by 2029[1] (tons/year)*
Nitrous Oxides (NOX)	3,207
Sulfur Oxides (SOX)	11
Volatile Organic Compounds (VOCs)	64
Diesel Particulate Matter (DPM)	20

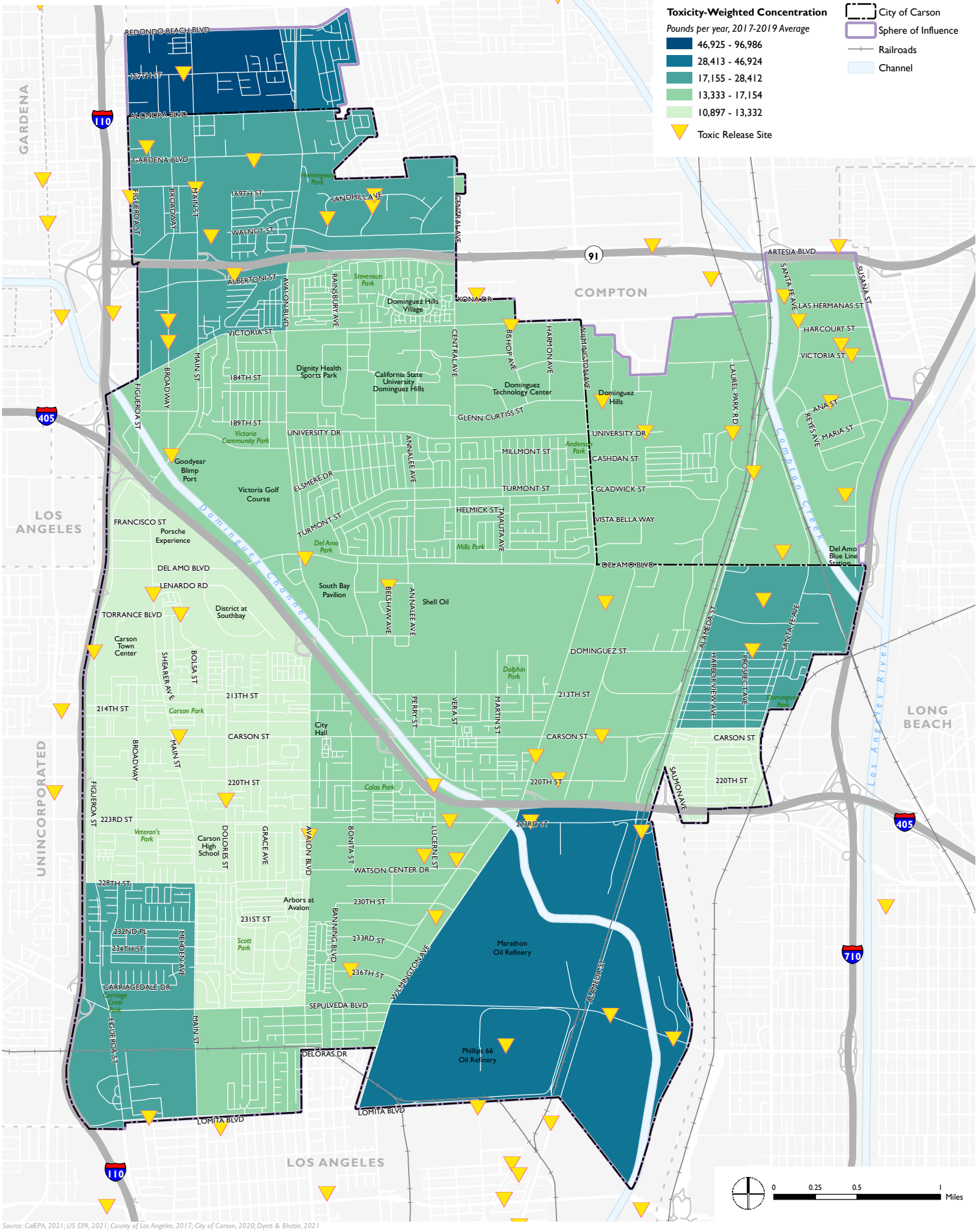
Notes:

1. Per CARB guidance, the emissions baseline was estimated for 2017, and milestone years 2024 and 2029. However, the emissions reductions for WCWLB target a 2030 completion date, due to the complexity of the efforts. While the baseline emissions were not calculated for 2030, staff expect the emissions to be similar to the 2029 estimates.
2. Estimated emission reductions from regulations are subject to future assessments and regulatory analyses.

Sources: Adopted from South Coast Air Quality Management District, 2019-2020 Annual Progress Report for AB 617 CERPs Table 1.

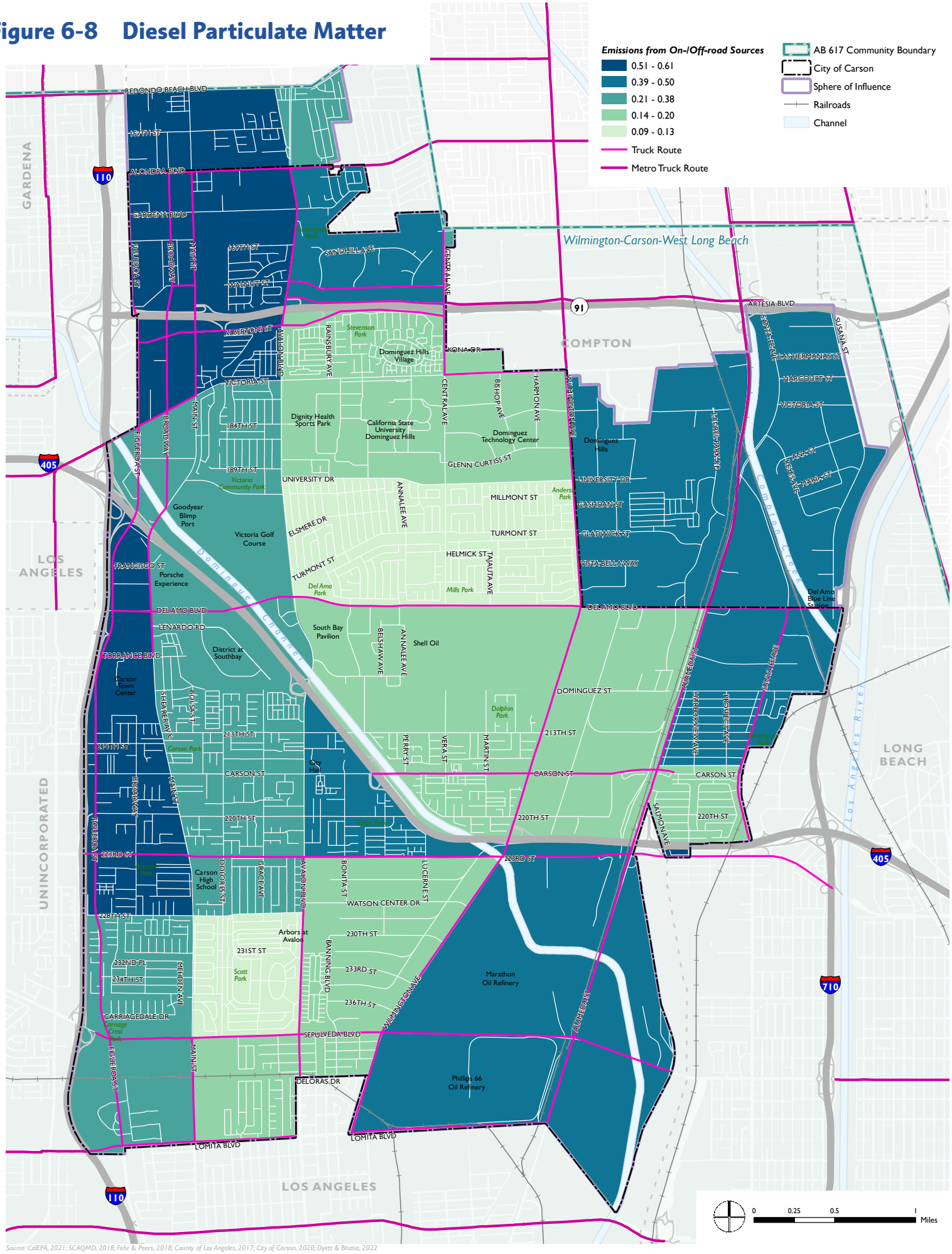
Portion of the Wilmington-Carson-West Long Beach community, one of the first selected in the state for a Community Emissions Reduction Plan.

Figure 6-7 Toxic Releases from Facilities



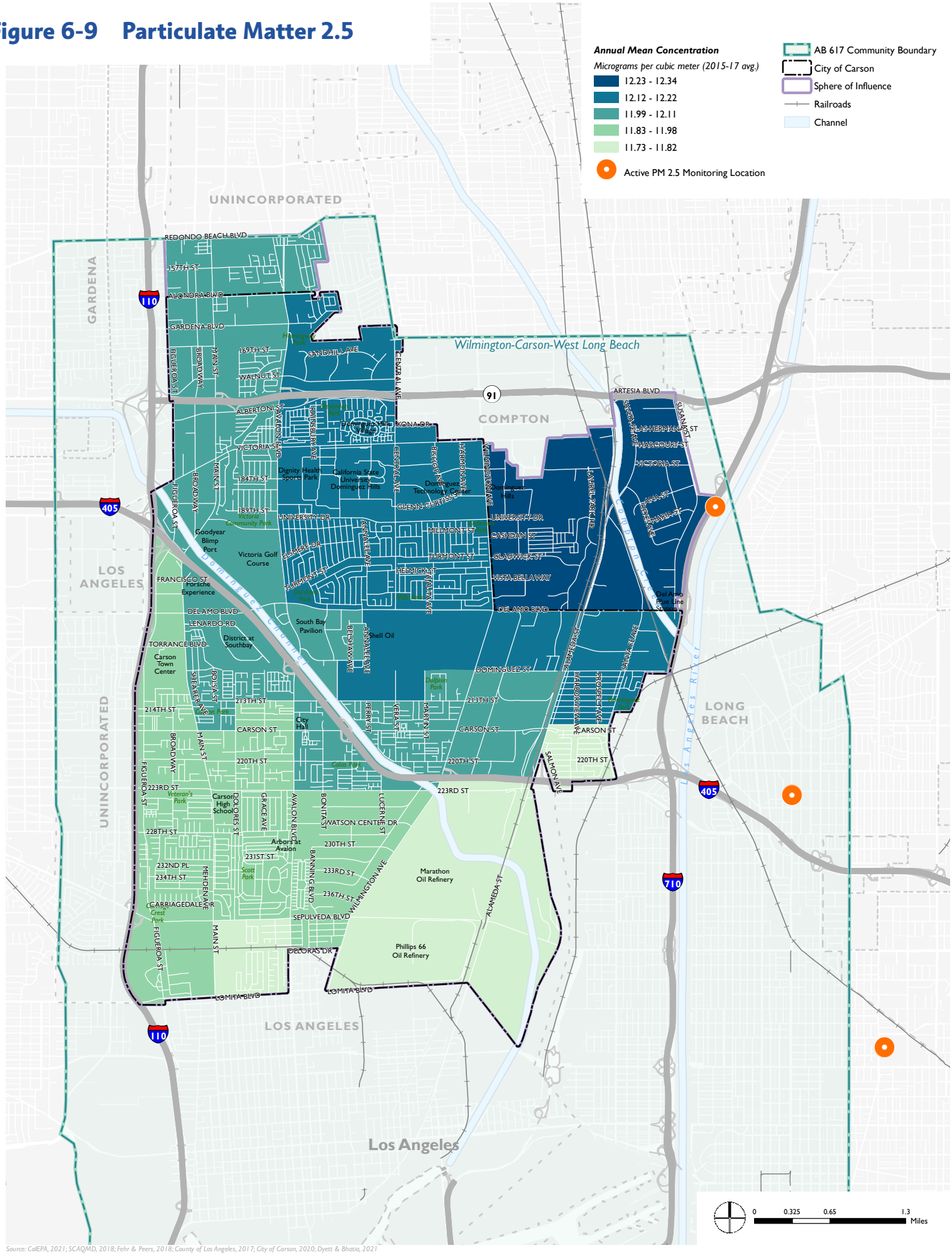
Source: CalEPA, 2021; US EPA, 2021; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2021

Figure 6-8 Diesel Particulate Matter



Source: CalEPA, 2021; SCAQMD, 2018; Fehr & Peers, 2018; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2022

Figure 6-9 Particulate Matter 2.5



Source: CalEPA, 2021; SCAQMD, 2018; Fehr & Peers, 2018; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2021

Figure 6-10 Threats to Water Quality

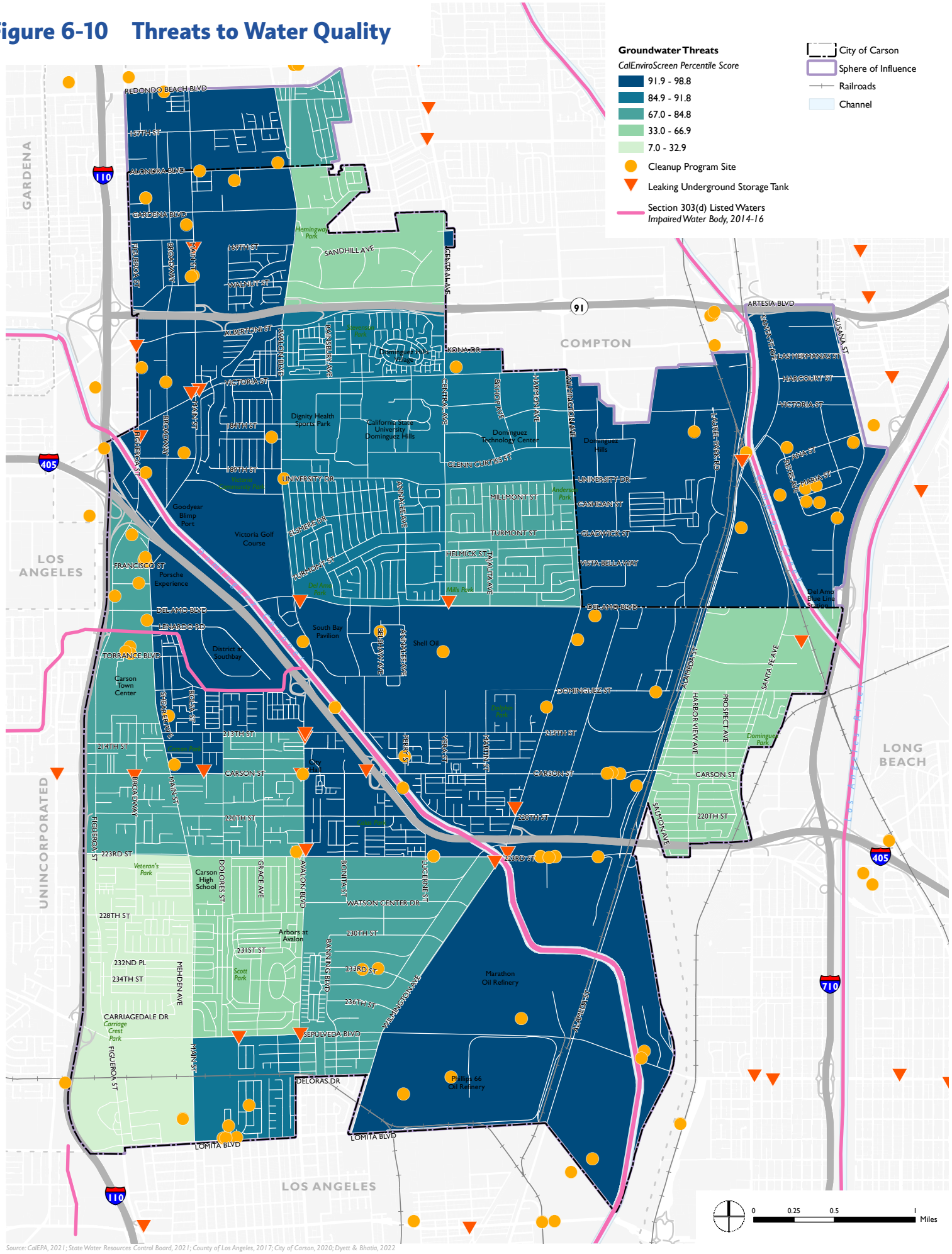
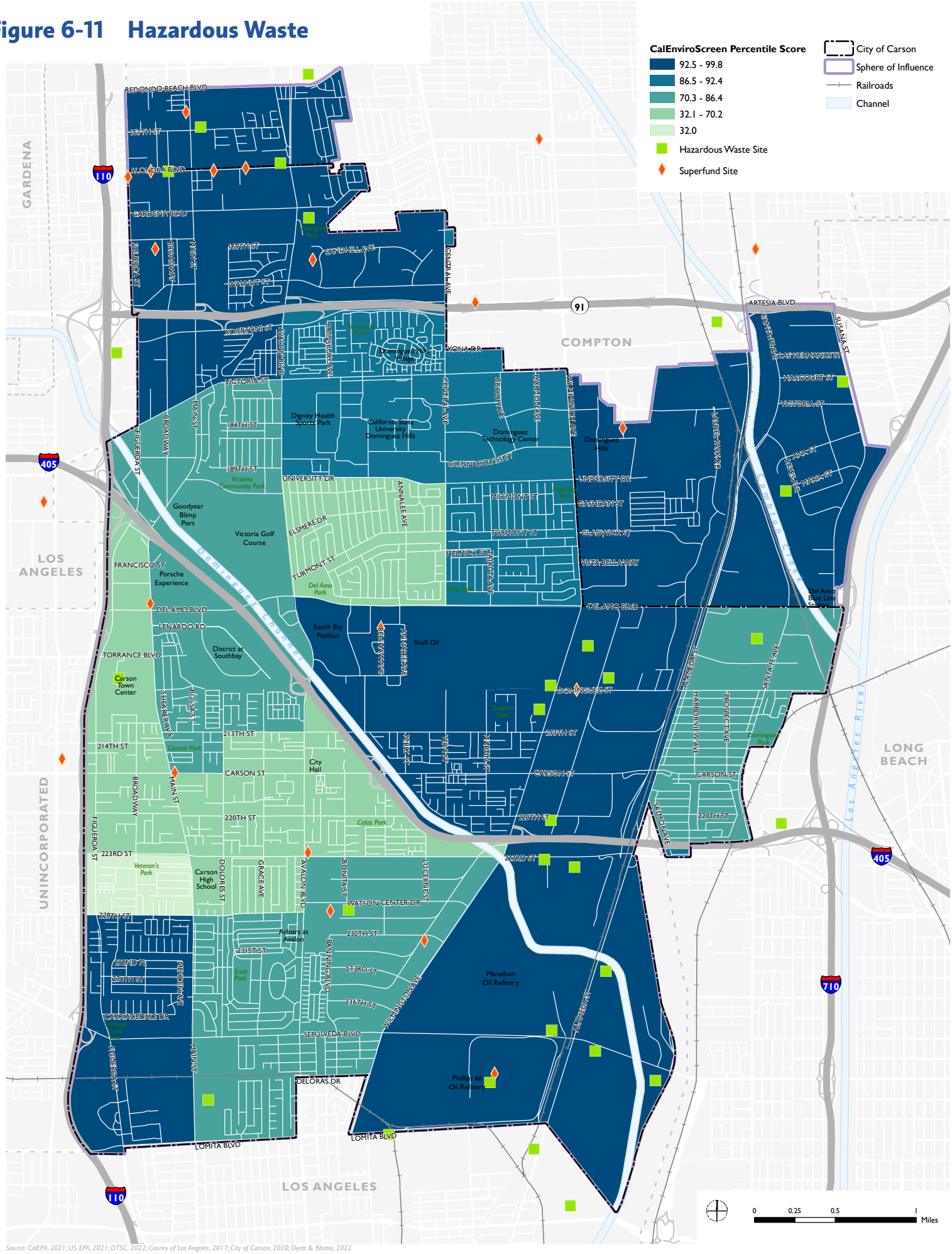


Figure 6-11 Hazardous Waste



Source: CalEPA, 2021; US EPA, 2021; DTSC, 2022; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2022

taminants are of relatively low concern in Carson (within lowest 25th percentile in the state), most census tracts in the Planning Area may be exposed to groundwater threats and impaired water bodies, as seen in Figure 6-10.

Ninety percent of public water systems in California—including Metropolitan Water District, California Water Service Company (Cal Water), and Golden State Water Company, which supply water to the Planning Area—rely on groundwater for at least a portion of their water supply.[4] Threats to groundwater quality include cleanup program sites and leaking underground storage tanks that are tracked by the State Water Resources Control Board (SWRCB), and many are located throughout the Planning Area. These sites can also elevate levels of toxic contaminants in nearby water bodies. When toxic contaminant levels exceed certain levels set by SWRCB, the water body is included in SWRCB's Section 303(d) list as a "listed water body" (or impaired water body). All of the water bodies within the Planning Area are listed water bodies. Figure 6-10 shows the location of groundwater threats and impaired water bodies.

4 State Water Resources Control Board, Groundwater Ambient Monitoring and Assessment Program – About, 2020. Available at: https://www.waterboards.ca.gov/water_issues/programs/gama/about.html. Accessed September 2021.

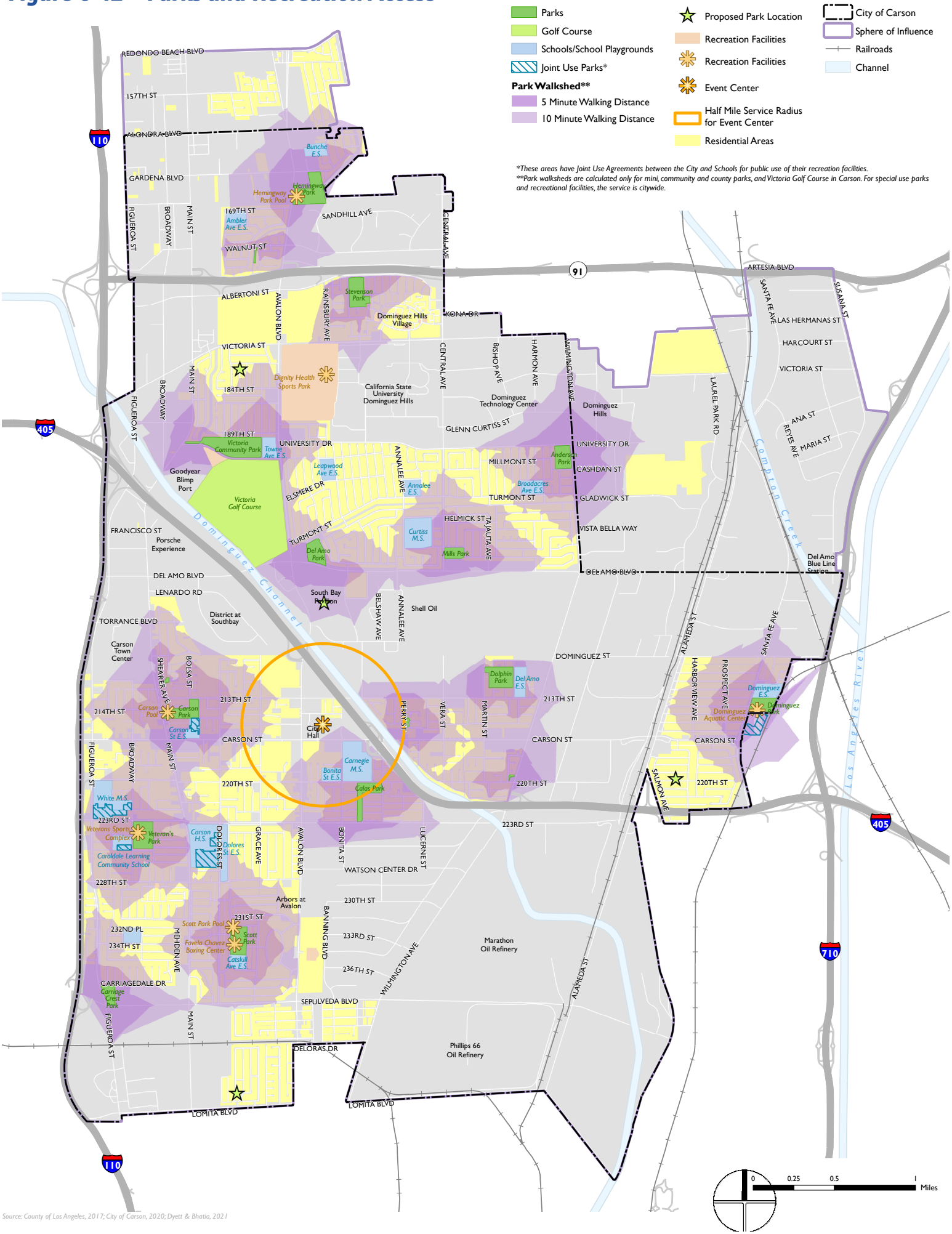
Please see Chapter 8: Open Space and Environmental Conservation for more information about hydrology and water supply.

TOXICS AND HAZARDOUS MATERIALS

Toxic materials and hazardous substances can contaminate the land when they are not properly handled, and people who work or live near sources such as cleanup or hazardous waste sites can be exposed to these pollutants through the air, soil, or water. While pesticide use is not a concern in Carson due to lack of agricultural uses in the vicinity, industrial activities and certain commercial uses like laundromats are sites that may cause soil pollution when improperly handled. Figure 6-11 shows how hazardous waste is largely a citywide concern, with a majority of census tracts scoring in the top 25th percentile in the state. Tracts at the western edge of the city, on the other hand, are much less impacted.

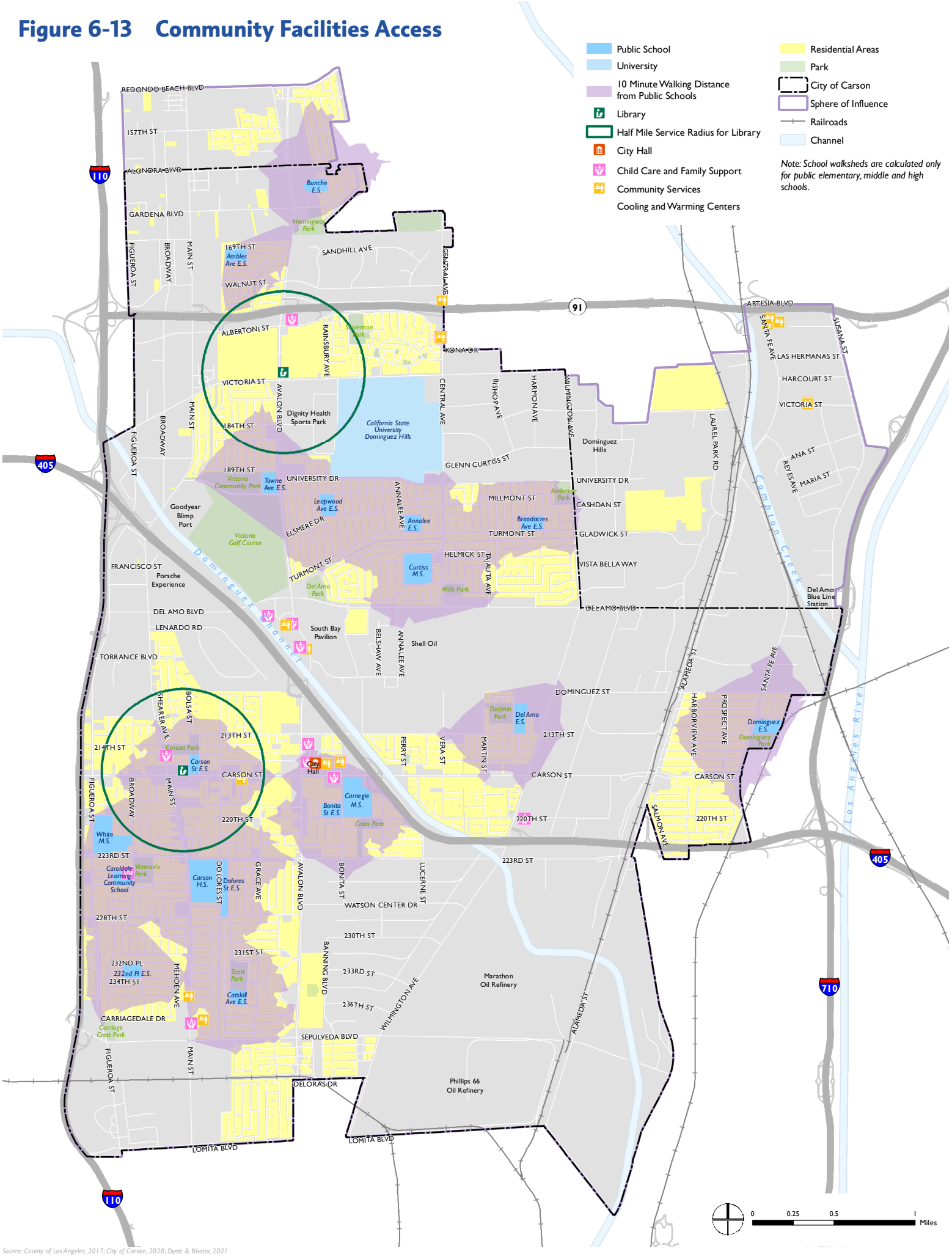
Information about hazardous materials is also covered in Chapter 7: Community Services, Education, and Safety.

Figure 6-12 Parks and Recreation Access



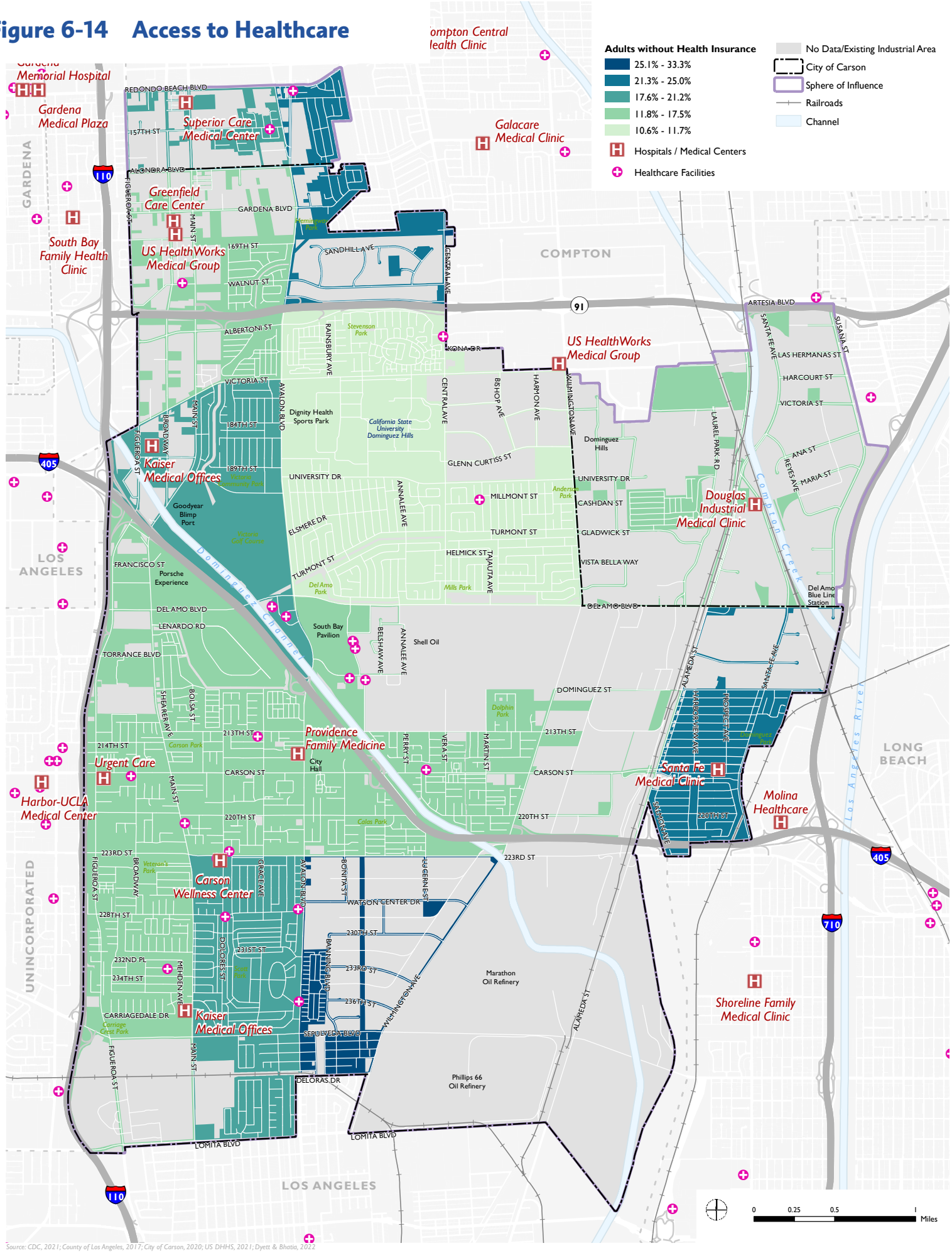
Source: County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2021

Figure 6-13 Community Facilities Access



Source: County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2021

Figure 6-14 Access to Healthcare



6.3 Public Facilities and Physical Activity

Access to public facilities, such as community centers, libraries, public transit, and parks and recreation facilities, and essential services like health care are important components of a healthy, livable community. Many DACs do not have adequate access to a wide range of necessary resources and may also lack facilities that enable physical activity and improve quality of life. These disparities could lead to health inequities such as elevated levels of stress and other health consequences

PARKS AND RECREATIONAL FACILITIES

Parks and recreational facilities offer some of the best opportunities for active play. The City currently maintains 117.3 acres of public parkland. Larger regional facilities—such as the County-owned Victoria Community Regional Park and Dignity Health Sports Park—are also significant recreational resources in Carson.

Figure 6-12 maps the locations of parks and recreational facilities in Carson. This map also shows the 10-minute walkshed from these public parks, which are generally equally distributed throughout the Planning Area; however, some residential areas (shown in yellow) are less well-served.

The City maintains Joint Use Agreements with the Los Angeles Unified School District for public use of their playgrounds and recreation facilities after school hours, and these additional locations help supplement some of the areas that have less access to parks. Potential park locations proposed in the General Plan, depicted as stars, would help expand access to better serve Carson residents.

For more detailed discussion about parks and recreation, see Chapter 5: Recreation and Active Lifestyle.

COMMUNITY FACILITIES

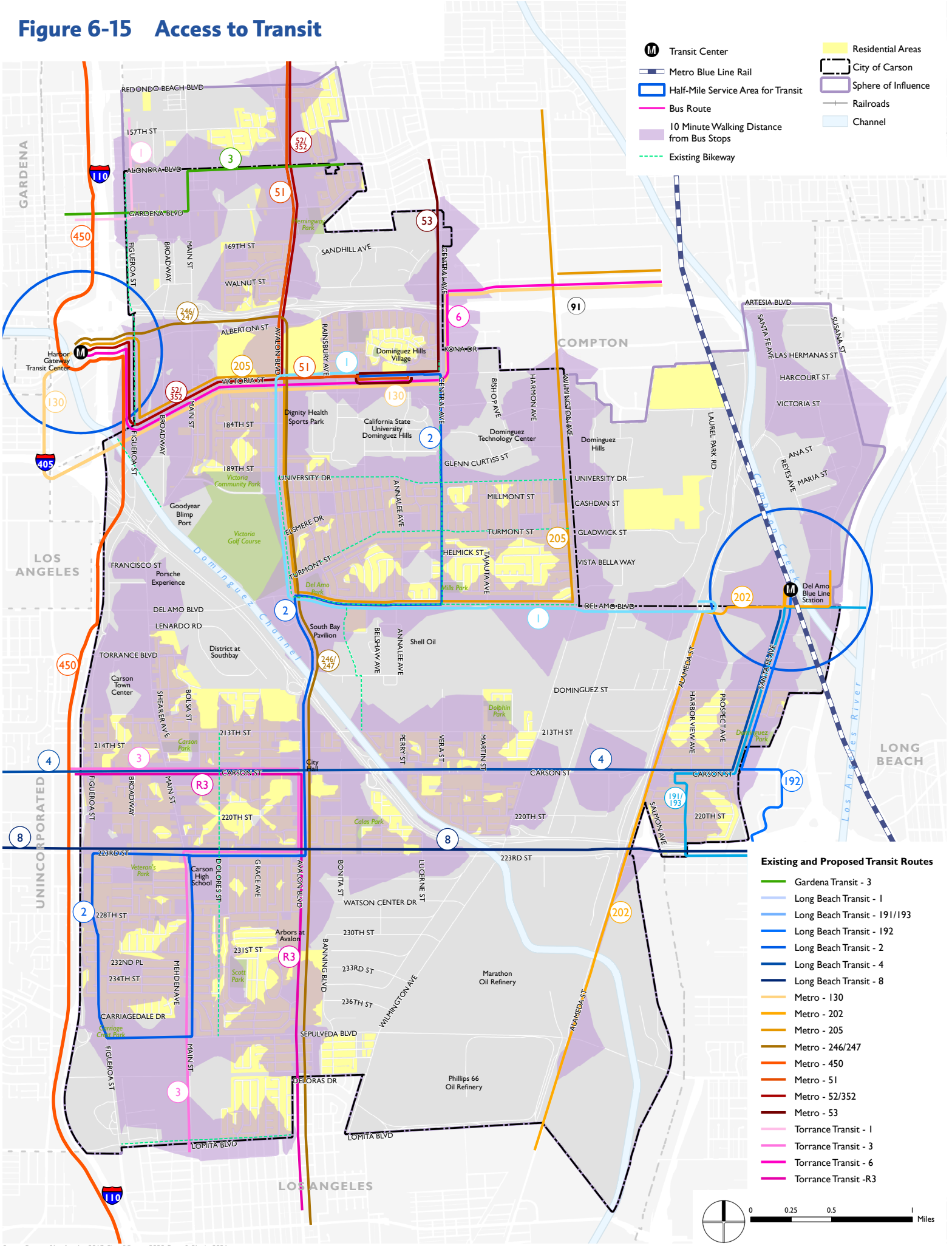
Community facilities like schools, libraries, childcare centers, and other locations that provide community services

support the daily needs of residents. Being located within convenient walking distance or appropriate service shed of these places can greatly contribute to quality of life, especially for populations who need them most.

As shown in Figure 6-13, most neighborhoods in Carson are within a 10-minute walking distance of public schools, but some areas, such as the neighborhoods north of CSUDH south of State Route (SR)-91 have less direct access to schools, although they are within a walking distance of the CSUDH campus.

Childcare centers and locations where residents can access community services are somewhat less well-distributed throughout the Planning Area. They tend to be clustered along major streets such as along SR-91, Interstate (I)-405, Carson Street, and Main Street. Likewise, access to libraries is not equal; residents in the eastern half of the city live farther away from the two libraries in Carson.

Figure 6-15 Access to Transit



HEALTHCARE FACILITIES AND SERVICES

Health insurance is a major determinant of access to necessary health services, including preventive care. According to the CDC, certain socioeconomic conditions such as lack of health insurance and poverty are associated with poor health status and chronic disease.[5] Physical barriers to access may also prevent certain individuals from receiving proper medical care, particularly for those with less mobility.

Figure 6-14 shows the percentage of the adult population between ages 18 and 64 by census tract that does not have health insurance.[6] In Carson, a large majority of tracts score among the top 50 percent in the state, with up to 33.3 percent of adults between ages 18 and 64 lacking health insurance coverage. This map also shows the locations of hospitals, medical centers, and healthcare facilities in and around the Planning Area. These facilities are well-distributed, and many are located within or nearby tracts that have less financial access to health services, indicating that cost may be a more significant barrier than geographic proximity.

5 Centers for Disease Control and Prevention, PLACES: Local Data for Better Health – Prevention Measure Definitions, 2020. Available at: https://www.cdc.gov/places/measure-definitions/prevention/index.html#lack-health-insurance. Accessed October 2021.

6 All persons aged 65 years or older are eligible for Medicare and therefore are not included in this indicator.

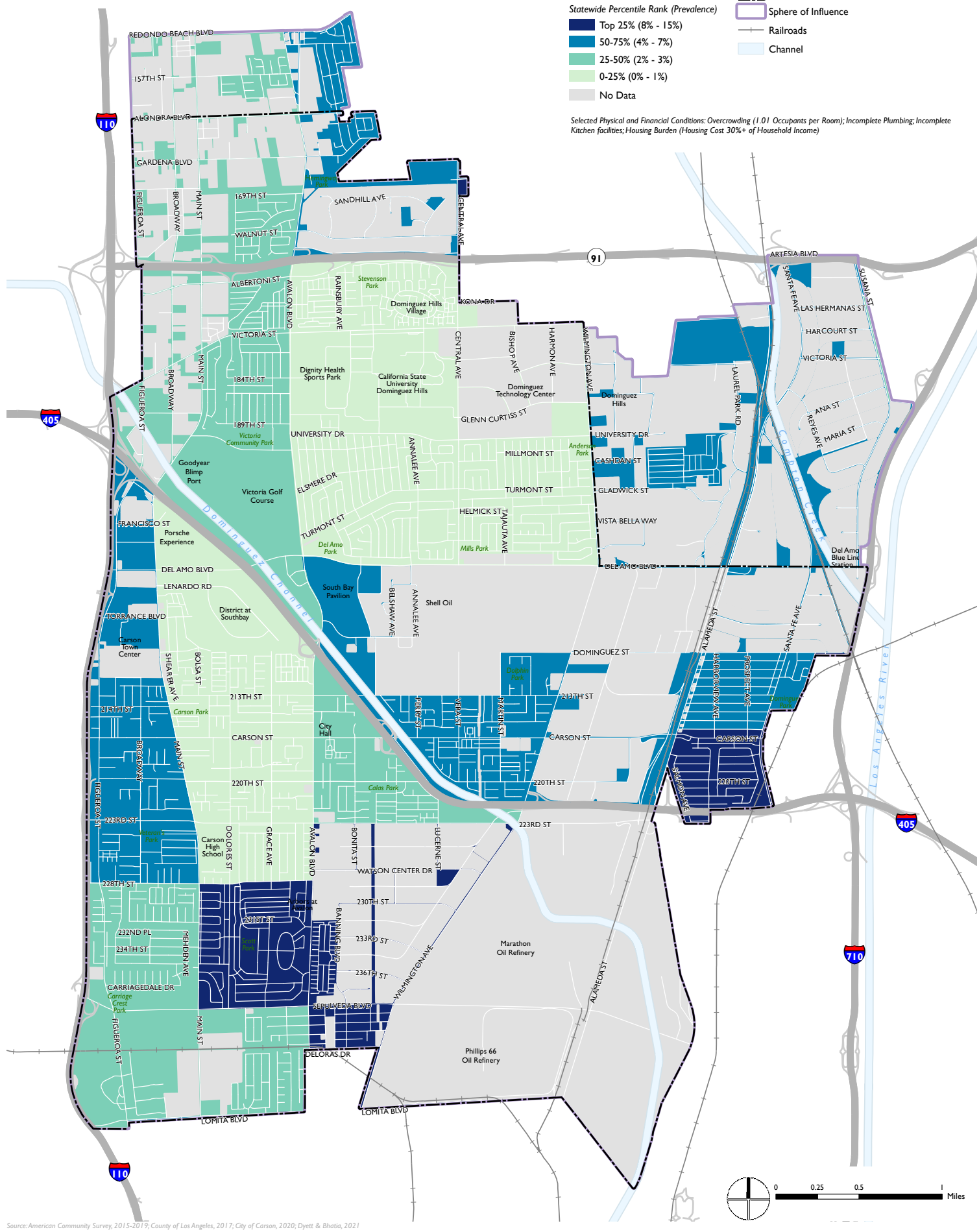
MOBILITY AND ACCESSIBILITY

Provision of active-transportation infrastructure that encourages walking and bicycling not only improves air quality by reducing pollution from vehicles but also supports active lifestyles. Further, it improves access to resources such as community centers and health facilities that residents need to lead a healthy life.

Most residential areas in Carson are within a 10-minute walking distance of bus stops, and bus routes traverse most of the major thoroughfares in the city, as shown in Figure 6-15. There are also two Metro transit centers near Carson that provide greater regional access. However, driving is the most common form of commuting in Carson, and over 89 percent of workers drive to work, a vast majority of whom drive alone. In comparison, only three percent take public transit, and two percent walk or bike. Identifying barriers to transit ridership and active modes of transportation, in addition to providing safe and convenient networks that connect residents to their jobs and other community destinations, may help augment mobility in the city and promote physical activity.

Mobility and transportation are also discussed in Chapter 3: Transportation and Connectivity.

Figure 6-16 Substandard Housing Conditions



6.4 Safe and Sanitary Housing

A safe and sanitary home is a fundamental component of a healthy quality of life. Two barriers to a safe and sanitary home are housing security and housing quality. Housing insecurity can disrupt school and job performance or lead to mental-health issues or homelessness, and often stems from lack of housing affordability. High housing-costs can also limit housing choice and can be a major driver of inequitable health outcomes and access to opportunity.

Housing affordability is an increasingly pressing issue in California and throughout the Los Angeles region. Rising housing costs are reflected in an increase in the proportion of households that are housing burdened—spending 30 percent or more of household income on housing costs—which has grown from 24 percent to 31 percent between 2010 and 2019, according to U.S. Census data from the American Community Survey (ACS) 5-Year Estimates. Significant housing burden—households with housing costs that are 50 percent or more of household income—affects 16 percent of residents in Carson.

HUD uses selected physical and financial housing characteristics to assess the quality of the housing inventory and its occupants. These indicators, including overcrowding (more than one person per room), incomplete kitchen facilities, incomplete plumbing facilities, and housing burden, help identify homes in which the quality of living and housing can be considered substandard. Figure 6-16 shows that some census tracts in the Planning Area have a high proportion of households that have two or more of these substandard conditions – as much as 14.8 percent.

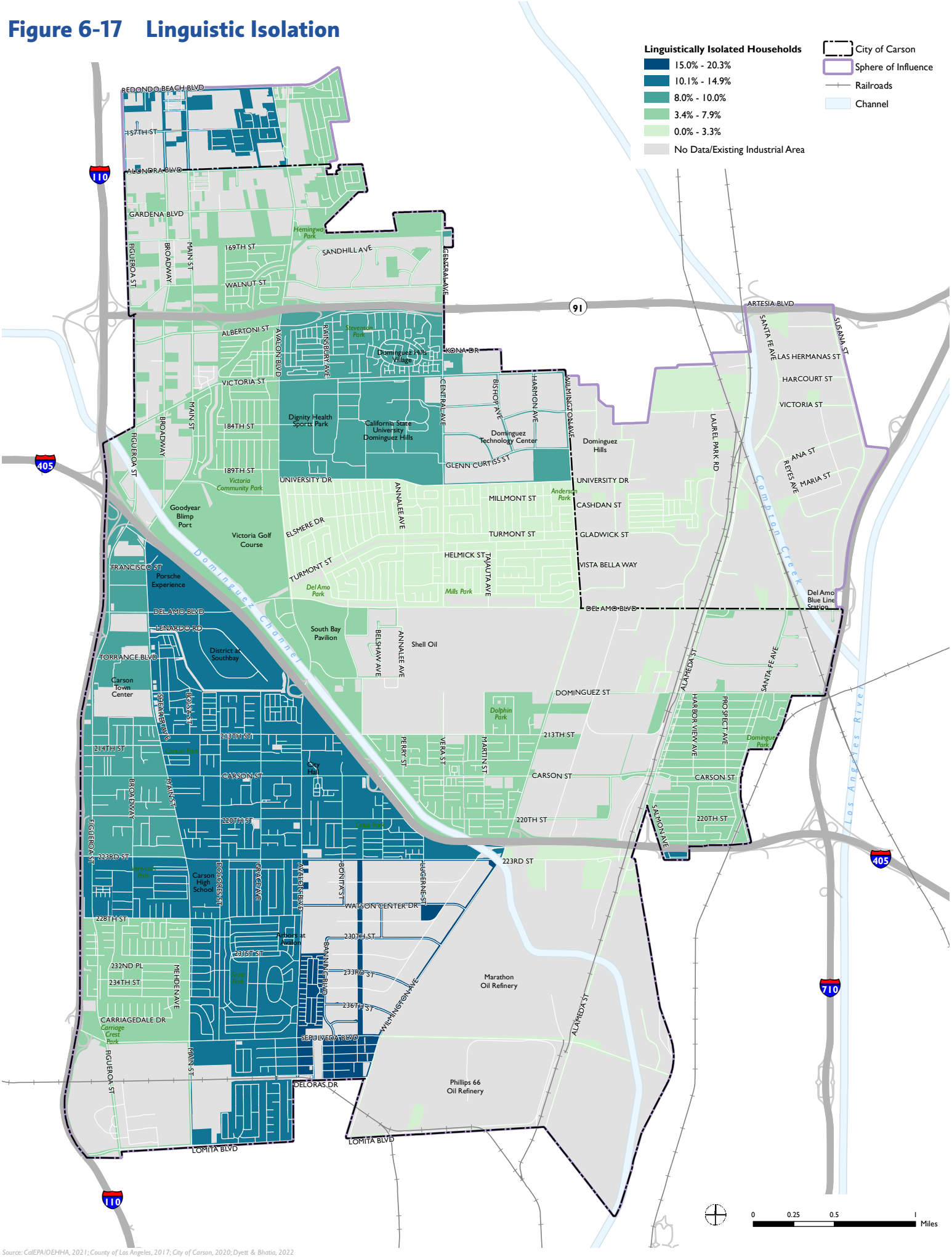
In accordance with State law and regional regulations, the City's Housing Element helps Carson meet the number of housing units allocated to the City by the Regional Housing Needs Assessment (RHNA). The goals, policies, and programs of the Housing Element, in combination with other elements of the General Plan, are designed to accommodate the changing needs of an increasingly diverse population. For more information about housing in Carson, see the Housing Element.

6.5 Community Engagement and Investment Prioritization

EJ seeks to ensure that everyone can meaningfully participate in in the decisions that affect their community. Community engagement (or civic engagement) and investment prioritization is particularly crucial in disadvantaged communities that have historically been left out of decision-making processes. By actively identifying and addressing barriers such as linguistic isolation, lack of internet or vehicle access, and other financial or physical restrictions, the City can improve public participation in decision-making.

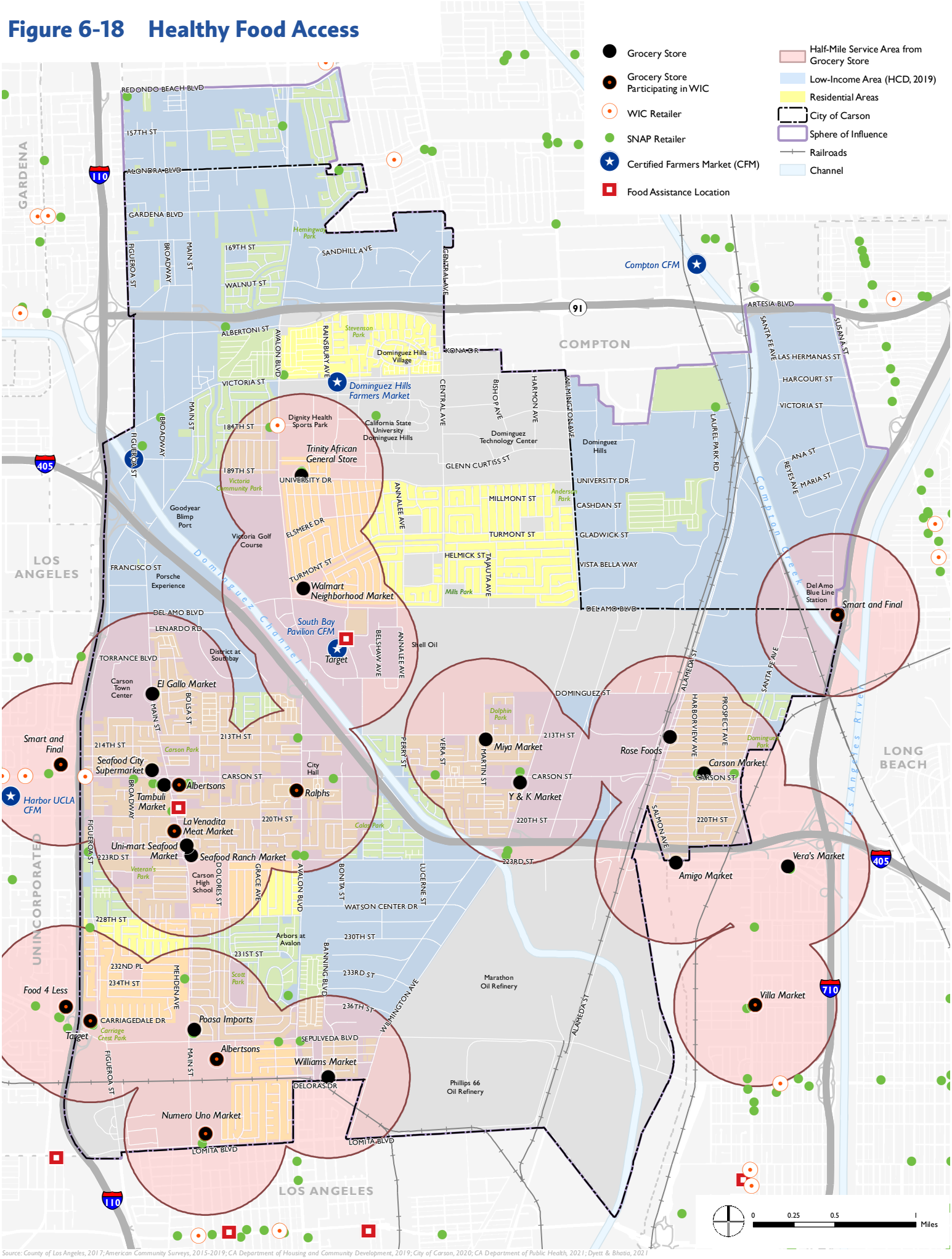
As described in Section 6.1, Carson is a racially and culturally diverse place with a significant representation of non-white residents. Accordingly, Carson is also a linguistically diverse place: Approximately 53 percent of the population (five years and older) speak a language other than English, and the most spoken language (other than English) is Spanish, making up 29 percent of the total population over five. However, some members of the community may

Figure 6-17 Linguistic Isolation



Source: CalEPA/OEHHA, 2021; County of Los Angeles, 2017; City of Carson, 2020; Dyett & Bhatia, 2022

Figure 6-18 Healthy Food Access



Source: County of Los Angeles, 2017; American Community Surveys, 2015-2019; CA Department of Housing and Community Development, 2019; City of Carson, 2020; CA Department of Public Health, 2021; Dyett & Bhatia, 2021

have limited English-speaking ability, meaning that they may have trouble communicating or understanding information to meet their needs. When all members of a household have limited English-speaking ability, the household is referred to as "linguistically isolated." About 8.6 percent of households in Carson are linguistically isolated, and as mapped in Figure 6-17, these households generally tend to be more concentrated in the neighborhoods south of I-405.

Digital access is an increasingly important medium for communication and plays a key role in providing many public services. Online information and virtual public meetings can expand access to those who may not have the ability to physically obtain resources or attend events, and they can also act as an efficient platform to accommodate populations with additional needs such as those who have a disability or require translation. Additionally, 3.6 percent of households in Carson do not have access to a vehicle, and about seven percent of households are headed by a single parent. Households without convenient transportation or those unable to afford childcare may also rely on online community engagement. However, based on 2019 ACS data, 11.7 percent of households in Carson do not have access to the internet in their homes. As such, effective outreach will need to continue to respond to the diverse needs of Carson's residents.

6.6 Access to Healthy Food

According to Feeding America, food insecurity is defined as a lack of consistent access to enough food for every person in a household to live an active, healthy life and is one way to measure how many people cannot afford food. Food insecurity can seriously impact health, especially when one must choose between spending money on food or medical care. In Los Angeles County, one in nine people face hunger, and one in seven children face hunger. Some people who are food insecure may qualify to receive federal assistance or benefits from programs Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps). According to 2019 ACS estimates, 7.3 percent of households in Carson receive benefits from these programs.

Additionally, those who are food insecure may have limited access to healthy food sources such as grocery stores, farmers' markets, and community gardens. Figure 6-18 shows how grocery stores in Carson are concentrated in the southern half of the city, whereas neighborhoods in the northern portions—which overlap with low-income areas, shown in blue—are relatively underserved. Lack of a healthy retail-food environment, such as an area oversaturated with fast food vendors and liquor stores, can particularly impact low-income areas without access to nutritious foods and can exacerbate health outcomes like obesity and diabetes. Schools, public cafeterias, and food assistance locations are also important food sources that should be considered in a healthy food system.

6.7 Climate Resilience

In light of changing climate conditions and increasing frequency of natural disasters including wildfires and extreme-heat events, resiliency is a key planning priority to protect the health and safety of the community. At-risk populations, including outdoor workers and seniors, are particularly vulnerable to conditions such as increasing temperatures.

Carson generally enjoys a mild climate due to its location close to the coast. However, areas with greater concentrations of heat-absorbing surfaces, including buildings, roads, and other built infrastructure, in addition to less greenery, have high temperatures in comparison to non-urban areas. This phenomenon is known as the urban heat island effect. As seen in Figure 6-19, which maps land surface temperatures obtained from satellite imagery, ambient temperatures vary throughout the city on a typical summer day in Carson. Neighborhood-level environmental conditions, including the level of development intensity and types of land cover (e.g., water, vegetation, parking lots) at that location, can exacerbate the severity of extreme heat events that can result in heat-related illnesses.

Investment in urban forest resources—that is, increasing the urban tree canopy coverage—can be a targeted strategy to cool these areas, especially in places where vulnerable populations live or work. Additionally, creating thermally comfortable walkways can increase pedestrian activity, which supports active lifestyles and improves connectivity and accessibility. Figure 6-20 shows the existing tree canopy cover in Carson. Most of the areas with tree canopy, even as low as one percent coverage, are limited to parks, some major streets, and certain residential neighborhoods. Comparing Figures 6-19 and 6-20 also shows that areas with higher tree canopy coverage correspond with areas that have cooler temperatures despite surrounding heat pockets. A citywide tree inventory and assessment may help the City identify strategic locations for interventions to mitigate the effects of heat where they are needed most.

Figure 6-19 Land Surface Temperature

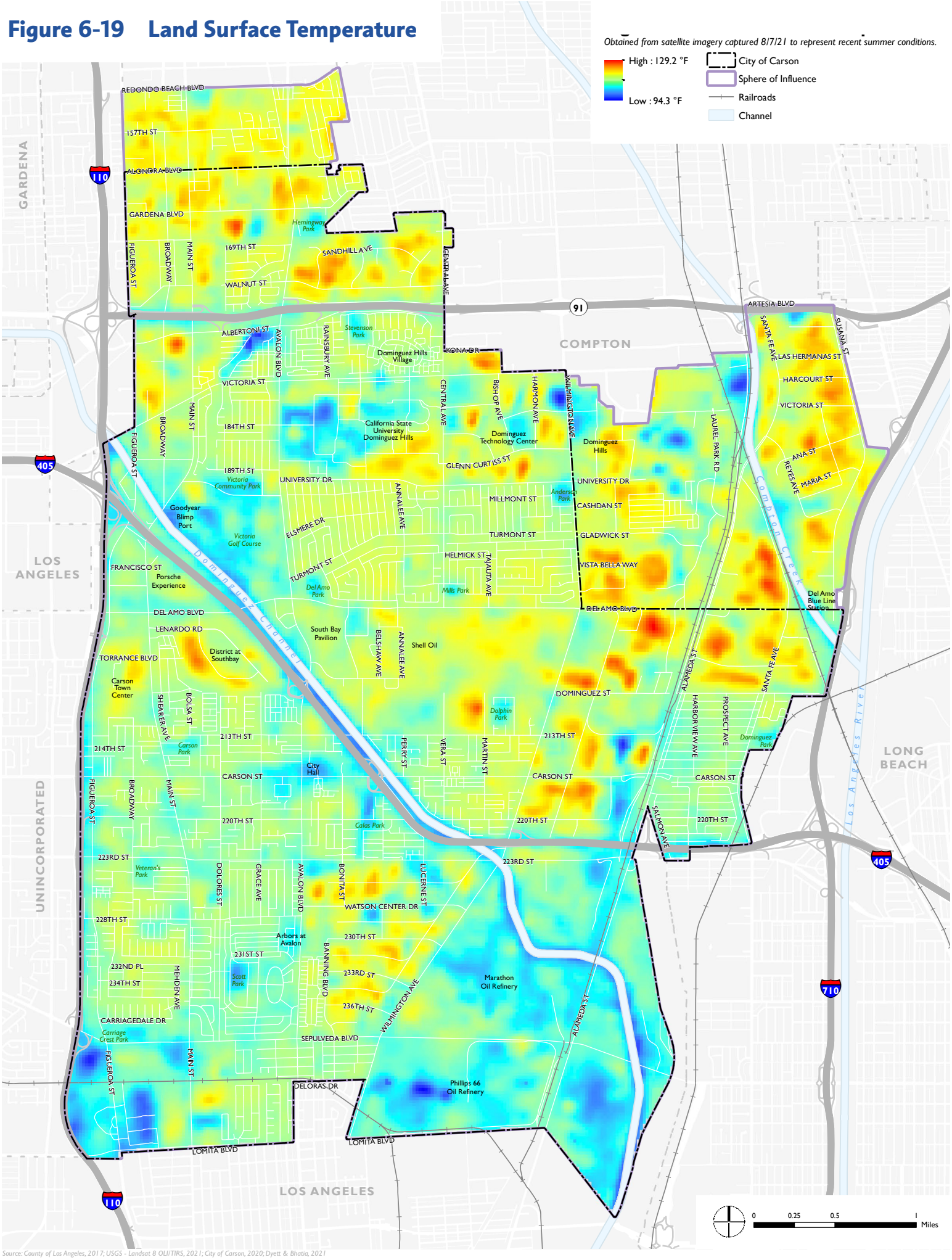
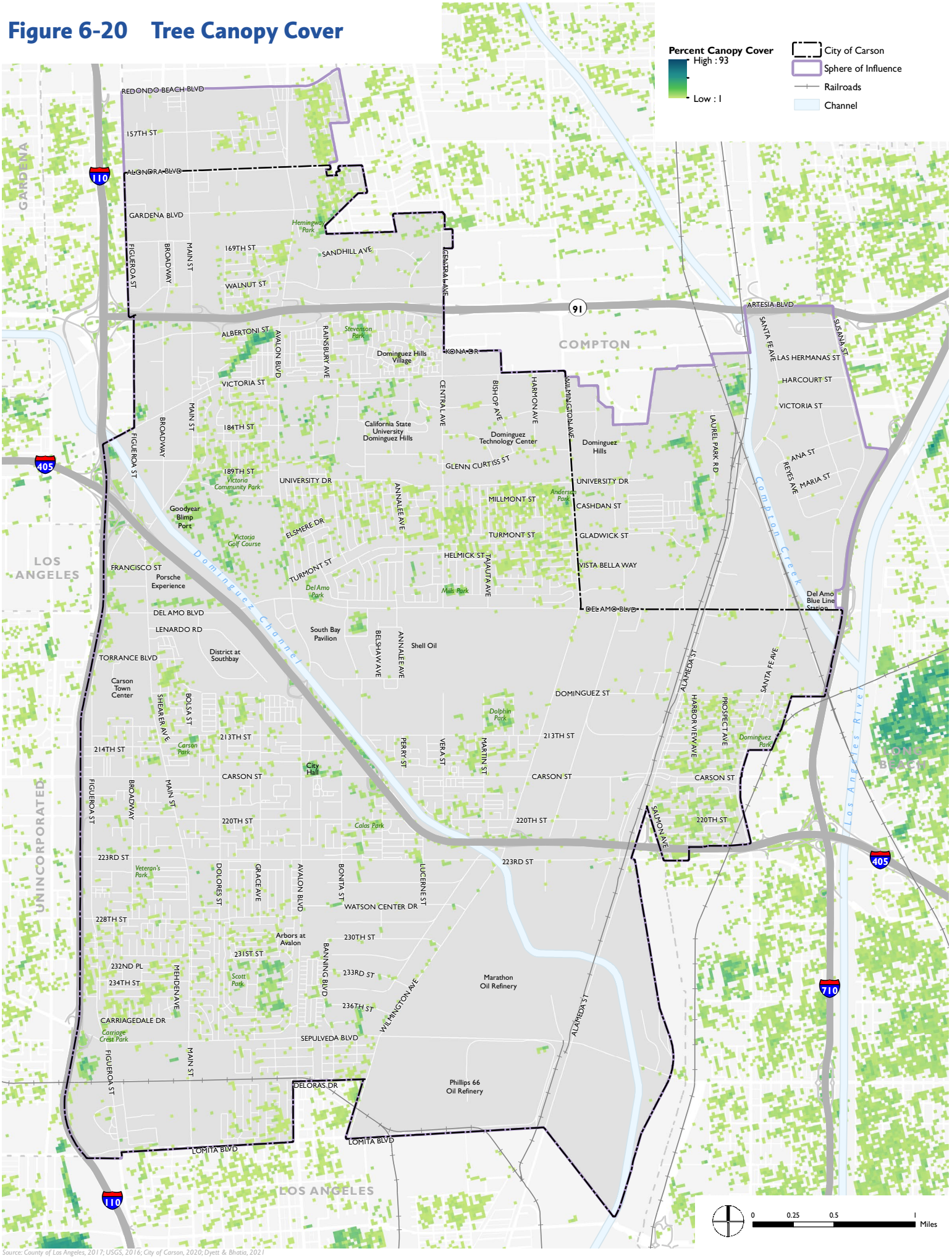


Figure 6-20 Tree Canopy Cover



6.8 Guiding and Implementing Policies

This section contains guiding and implementing policies that further the objectives required in an environmental justice element per State law. Environmental justice is necessarily a cross-cutting topic that intersects with many of the other elements in the General Plan including Chapter 2: Land Use and Revitalization; Chapter 3: Transportation and Connectivity; Chapter 5: Recreation and Active Lifestyle; Chapter 7: Community Services, Education, and Safety; Chapter 8: Open Space and Environmental Conservation. Policies related to housing will also need to coordinate with the Housing Element. Please see these chapters and other documents for more detail and additional goals and policies. Text in italics is for reference only and is not considered adopted policy.

GUIDING POLICIES

CHE-G-1 Seek to improve citywide health outcomes and reduce disparities between census tracts by focusing on prevention and interventions, and by addressing the root causes of health disparities and equities in Carson.

CHE-G-2 Reduce air pollution and the incidence of respiratory illness through the land use planning process.

CHE-G-3 Proactively coordinate City air quality improvement activities with the South Coast Air Quality Management District and other regional programs, as well as with neighboring communities.

CHE-G-4 Protect community health from pollution by toxics and hazardous materials, especially in areas with vulnerable or sensitive populations.

CHE-G-5 Protect, restore, and enhance the quality of surface and groundwater resources to ensure all residents have access to healthy water.

CHE-G-6 Explore opportunities and seek funding to remediate and redevelop brownfields as sites to spur economic development, expand natural open spaces and parks, community gardens, and other similar health-promoting community revitalization activities, particularly in underserved neighborhoods.

CHE-G-7 Provide residents of all ages and income levels with convenient and safe opportunities for recreation and physical activities.

CHE-G-8 Improve bike, pedestrian, and transit connectivity to community facilities and services, especially in underserved areas.

CHE-G-9 Foster healthy, diverse neighborhoods with a robust supply of safe, sanitary, affordable, and stable housing available to residents of all ages and abilities, especially disadvantaged communities.

CHE-G-10 Strengthen community capacity to actively participate in civic life and in development and implementation of solutions for neighborhood priorities, particularly historically underrepresented groups.

CHE-G-11 Utilize diverse methods of outreach that promote public participation and ensure City events are communicated to all communities, especially to linguistically isolated households, households without internet access, and low-income residents.

CHE-G-12 Support development of venues with healthy food options such as fresh produce, including farmers' markets and grocery stores.

CHE-G-13 Promote nutrition education and access to healthy foods. Work with the school districts to promote affordable healthy foods, and fresh fruits and vegetables in schools and other public places.

CHE-G-14 Focus planning and intervention in and with communities with the highest need by ensuring that policies, services, and programs are responsive to community members who are most vulnerable to the potential impacts of climate change.

CHE-G-15 CHE-G-15 Increase investment in tree planting, incentives for green buildings and cool paving, and actively pursue the creation of new green spaces in areas with the highest heat-related vulnerability and/or highest ambient temperatures.

IMPLEMENTING POLICIES

Community Health

CHE-P-1 Regularly map the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics Life Expectancy indicator to track changes in the city.

CHE-P-2 Develop intentional strategic partnerships with the Los Angeles County Department of Public Health and other public, private, and nonprofit entities to improve health outcomes by leveraging capacity, resources, and programs centered on health, equity, and sustainability. Collaborate with these partners to share data and increase communication on overlapping demographics that are mutually served.

CHE-P-3 Work with the City Human Services Department and other public, private, and nonprofit partners to educate the public about health and wellness by supporting information and interventions that are readily accessible, culturally relevant, and linguistically accessible.

Pollution Exposure

For additional policies related to air quality, see Chapter 8: Open Space and Environmental Conservation. Policies in that element also seek to reduce neighborhood exposure to pollution from freeways and from other industrial activities.

CHE-P-4 Continue to enforce zoning and design standards that protect sensitive uses from the encroachment of land uses that would result in impacts from noxious fumes or toxins.

CHE-P-5 Recognize and actively promote policies to create a multimodal transportation system that reduces solo driving.

CHE-P-6 Collaborate with South Coast Air Quality Management District (SCAQMD) to coordinate policies that reduce air pollution from local sources and implement programs that leverage funding from Senate Bill (SB) 535, Assembly Bill (AB) 1550, AB 617, and other sources to improve air quality and public health.

CHE-P-7 Seek and secure funding for regular groundwater quality assessment, monitoring, management, and education regarding groundwater quality issues, particularly around known locations of groundwater threats and potential pollution sources located in disadvantaged communities.

CHE-P-8 Avoid new toxin sources by stringently evaluating the siting of facilities that might significantly increase pollution, especially near already disproportionately impacted communities.

Public Facilities and Physical Activity

CHE-P-9 Assess service provision using a 10-minute (one-quarter mile) walkshed from parks and recreational opportunities to residential areas and identify areas that are underserved to locate new parks.

CHE-P-10 Facilitate the location of additional transportation routes, including new bikeways, to existing recreational facilities.

CHE-P-11 Encourage the location of parks near other community facilities such as schools, senior centers, and recreation centers. Explore opportunities to co-locate compatible facilities when possible and continue to provide access to existing recreational resources through joint-use agreements.

CHE-P-12 Identify locations to install diagonal crosswalks in strategic locations that support pedestrian movement.

CHE-P-13 Work with the County, non-profits, and other public and private organizations to encourage local employers to adopt healthy employee programs such as health challenges (e.g., bike-to-work days, lunchtime/worktime sponsored events), healthy food choices, and healthy work environments, as well as to provide adequate health coverage and benefits to employees.

For example, the City of Los Angeles uses a broad range of incentive programs including financial (grants, loans, reduced permit fees, etc.), technical (feasibility studies, architectural, marketing, etc.), case management (permit expediting, etc.), political (identifying key stakeholders), and other assistance to attract businesses that improve public health. Another approach the City uses is to prioritize building relationships with industries and employers that commit to providing employee benefit programs, as well as to incentivize contractors and vendors in the public bidding process who provide such programs.

Safe and Sanitary Housing

For additional policies on housing, see the Housing Element.

CHE-P-14 Work with the Carson Housing Authority (CHA) to identify funding sources or incentives to rehabilitate or upgrade housing occupied by low-income renters and homeowners to incorporate sustainable and green building practices that support a healthier living environment such as the highest energy efficiency standards and air filtration and ventilation systems.

CHE-P-15 Coordinate with CHA and other housing agencies to ensure implementation of the Housing Element addresses environmental justice, including sanitary housing and maintenance, pollution and environmental hazards, affordability, and other community concerns.

Civic Engagement and Investment Prioritization

CHE-P-16 Support community-based organizations and other community partners that increase opportunities for community involvement in civic process by providing technical assistance, data, meeting spaces, and other support services as feasible. Develop and maintain a list of these partners to optimize coordination efforts.

CHE-P-17 Seek to incorporate culturally competent policies and practices that enable effective outreach to underrepresented communities.

Cultural competence is the application of cultural knowledge, sensitivity, and awareness of different racial, ethnic, religious, or social groups by an agency in its standards, policies, practices, and attitudes that enables them to work effectively cross-culturally. A culturally competent organization has the capacity to value diversity, conduct self-assessment, manage the dynamics of difference, acquire and institutionalize cultural knowledge, and adapt to diversity and the cultural contexts of the communities they serve. These principles should be incorporated in all aspects of policy making, administration, practice, and service delivery, and systematically involve consumers, key stakeholders, and communities.

CHE-P-18 Employ a wide range of outreach methods and activities, including pop-up events, focus groups, community workshops, and online surveys that are tailored to best reach target audiences.

CHE-P-19 Identify barriers to participation and provide methods to remove these barriers such as transportation vouchers, translation services, childcare, food, or monetary compensation.

Access to Healthy Food

CHE-P-20 Leverage financial incentives, zoning, technical assistance, and other similar programs to attract grocery store retailers in underserved areas.

Programs could include grants or loans to purchase updated equipment (such as refrigerators), publicity, and directories of healthy food outlets.

CHE-P-21 Seek to conserve or relocate supermarkets as mixed-use developments on aging strip commercial centers are undertaken.

CHE-P-22 Discourage oversaturation of unhealthy food retailers such as fast-food restaurants and liquor stores, especially in low-income communities.

CHE-P-23 Identify appropriate sites such as public or institutional lands and parking lots for farmers' markets and urban agriculture and review existing ordinances to remove barriers to establishing new farmers' markets, community gardens, and home gardens.

CHE-P-24 Explore opportunities for expanding urban agriculture such as converting underutilized industrial warehouses and factories for vertical farming and hydroponic/aeroponic growing.

Vertical farming is a type of indoor urban agriculture that utilizes large or tall buildings to grow food, taking advantage of controlled light, temperature, water, and even carbon dioxide levels to improve production without use of excessive chemicals. Hydroponic farming is a technique where soil is replaced with nutrient-rich water instead, while aeroponic farming grows plants in an air or mist environment.

CHE-P-25 Compile a list of existing resources—such as cooking classes, gardening classes, and financial support—that residents can use to gain greater access to and learn more about healthy food.

CHE-P-26 Partner with Cal State University Dominguez Hills to promote and expand access to the Campus Urban Farm and nutrition education activities.

Climate Resilience

See additional policies related to urban forestry in Chapter 8: Open Space and Environmental Conservation.

CHE-P-27 Work with community-based organizations to expand access to and awareness of cooling centers and resilience hubs that provide safe spaces during wildfires and extreme heat events, especially for outdoor workers, seniors, homeless individuals, and other vulnerable populations.

CHE-P-28 Work with the City Community Services Department to establish partnerships with nonprofits and identify funding sources to conduct an Urban Tree Canopy Assessment and establish a citywide tree canopy goal.

CHE-P-29 CHE-P-29 Seek to plant tree species that balance sustainability and heat mitigation potential such as those that are drought-tolerant, pest-resistant, and maximize shade.

CHE-P-30 CHE-P-30 Target heat mitigation strategies such as installation of shade structures at bus stops and in public spaces to benefit those that are most impacted and are vulnerable.