

Chapter 3: Community Profile

Introduction

It is essential to understand the characteristics of a community and the profile of air pollution sources in order to address community air quality priorities. The following community profile provides a general overview of the Wilmington, Carson, West Long Beach (WCWLB) community, including the types of air pollution impacting the community, and a characterization of public health and socioeconomic factors. In addition, this section includes information about the community boundary that reflects input from the Community Steering Committee (CSC), a summary of the air pollution concerns identified by the community, and the air quality priorities based on CSC and public input. These air quality priorities are addressed in the Community Emission Reduction Plan (CERP) actions, described in Chapter 5.

Chapter 3 Highlights

- The community profile is based on input from the Community Steering Committee throughout the CERP development process
- The Community Steering Committee identified the top air quality priorities to be addressed in the CERP
- Data on land use, toxic air pollution impacts, public health factors, social and economic factors in the community provides useful background information
- Information about the sources of air pollution in this community is presented in a “source attribution” analysis [currently under development]

Community Boundary, Air Quality Concerns and Air Quality Priorities

During the monthly CSC meetings, committee members, members of the public, and South Coast AQMD staff worked together to shape the elements and actions described in this Plan. Topics discussed with the CSC include:

- What should be the community **boundaries** for the AB 617 community plans?
- What **air quality concerns** does the community have?
- What are the top **air quality priorities** that the community would like to address through the AB 617 CERP?
- What **priority actions** should be included in the CERP?
- What should the **goals** for the priority actions include?
- Any additional **feedback on the Draft CERP**

The process is summarized in Table 3-1. The CSC members discussed which geographic areas should be included within the community boundary, shown in Figure 3-1. The Wilmington, Carson, West Long Beach CSC preferred to have a single community boundary line, which includes air pollution sources (e.g. facilities and major truck routes) as well as places where children, people with existing health problems, and other people spend time (e.g. schools, residential areas, community centers, and hospitals). Regions within and near the community boundary will benefit from the emissions reductions within the boundary.

The CSC and members of the public participated in an interactive mapping activity to identify community air quality concerns, which were posted on the webpage¹. CSC members also provided additional air quality concerns by email and other conversations; these concerns were also added to the map shown in Figure 3-1 and listed in Figure 3-2, and a list of these additional concerns were posted to the webpage.

Next, the air quality concerns were grouped into categories (e.g. refineries, truck traffic, oil and gas extraction, etc.), and the CSC and members of the public prioritized the top air quality concerns to address through AB 617 community plans. CSC members were invited to provide ideas and input on CERP actions and also meet with South Coast AQMD staff to draft CERP actions together. The highest priority actions were included in the draft CERP based on input from the CSC members.

It is reasonable to expect that there will be new information that becomes available while the CERP and Community Air Monitoring Plan (CAMP) are being implemented. Both the CERP and CAMP documents are “living documents”, so that necessary adjustments can be made as they are being implemented.

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¹ Interactive map of air quality concerns in the Wilmington, Carson, West Long Beach community: <https://scaqmd-online.maps.arcgis.com/apps/View/index.html?appid=534f48ca127c430abb1a5f4f6e86cf00&extent=-118.5536,33.6686,-117.8945,33.9359>

Table 3-1. Process of CSC Input on CERP elements

CSC Meeting #	Discussion Topic(s)	What type of input did the CSC give?	How this CSC input was used in the CERP development process?
#1 November 2018	Community Air Quality Concerns and Community Boundary	Refined community boundaries . Identified community air quality concerns . <u>Outcome</u> : list of air quality concerns	Boundaries were used to define focus area for CERP actions (see Meetings #4-5). Concerns were prioritized for inclusion in Plans (see Meeting #3).
#2 January 2019	Community Boundary	Refined community boundaries . <u>Outcome</u> : community boundary	Boundaries were used to define focus area for CERP actions (see Meetings #4-5).
#3 February 2019	Air Quality Concern Prioritization	Prioritized which concerns would be addressed in Plans. <u>Outcome</u> : air quality priorities	Actions were developed for air quality priorities (Meetings #4 and #5)
#4 March 2019	Strategies & Proposed Actions (Part 1)	Ideas for actions can be written into the Plans. Staff will work with CSC members to write CERP actions. <u>Outcome</u> : draft focused list of actions for CERP	Feedback on actions were used to develop the list of priority actions (Meeting #6).
#5 April 2019	Strategies & Proposed Actions (Part 2), Draft CAMP, and Draft CERP Table of Contents & Action Template		
#6 May 2019	Focused list of CERP Actions (“priority actions”)	Provided feedback on which priority actions should be included in CERP. <u>Outcome</u> : list of priority actions for CERP	Feedback on actions were used to finalize the list of priority actions to be included in the Draft CERP .
#7 June 2019	Draft CERP, Goals for each CERP Action (Part 1)	Feedback on Draft CERP . Ideas for specific goals for each CERP action. <u>Outcome</u> : Revised Draft CERP	Feedback on Draft CERP and ideas for specific goals will be used to inform the Draft Final CERP in the Board package.
#8 July 2019	Goals for each CERP Action (Part 2)		
#9 August 2019	Final Discussion of Draft CERP	Final revisions for Draft CERP before it is submitted to South Coast AQMD Board for consideration. <u>Outcome</u> : Draft Final CERP and Appendices	Final comments to be addressed in Draft Final CERP that is part of the Board package.

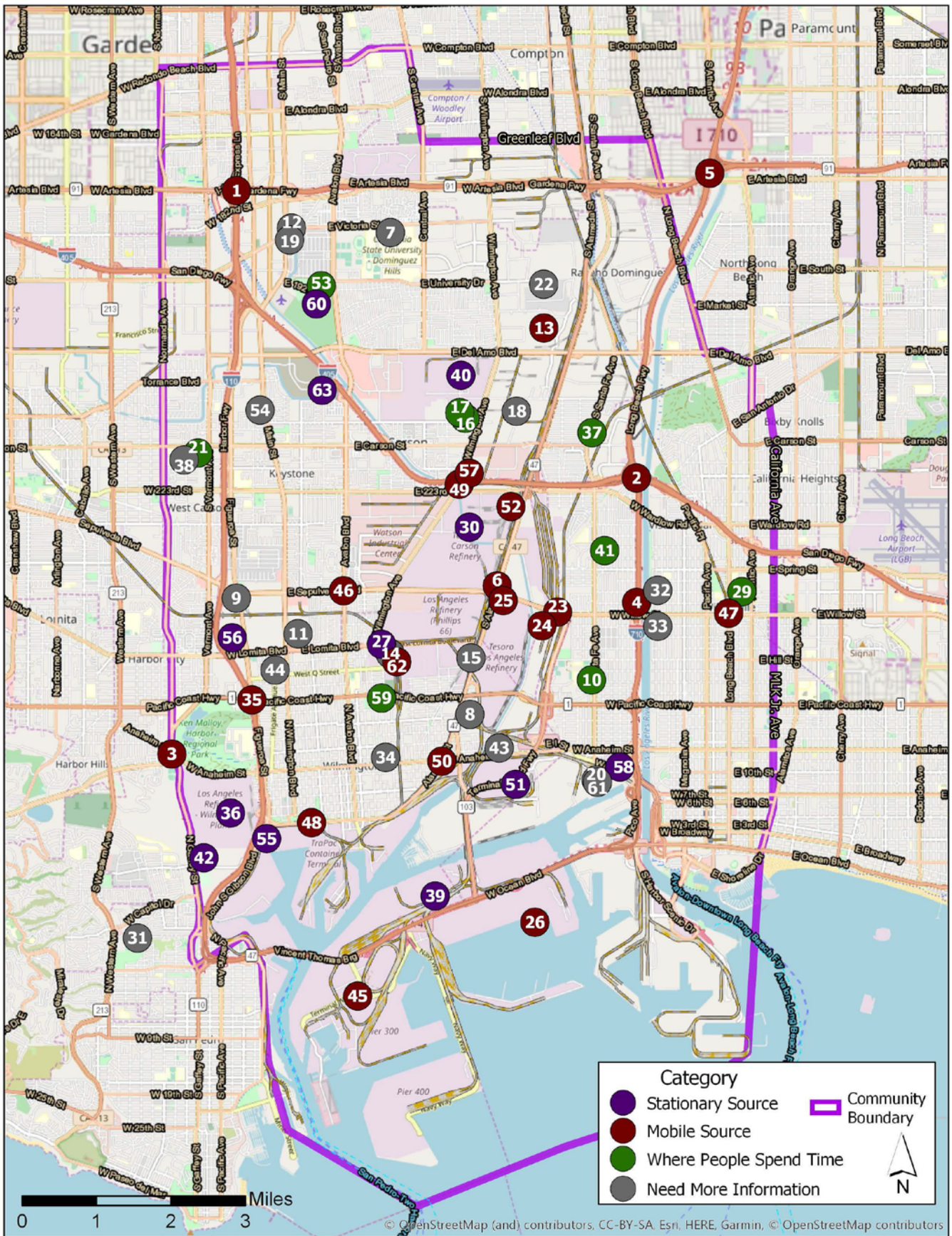


Figure 3-1. Map of air quality concerns identified by the WCWLBCSC and members of the public

Label	Concern Name	Category	Label	Concern Name	Category
1	110/91 and 405/710 Fwy	Mobile Source	33	Oil drilling	Stationary Source
2	110/91 and 405/710 Fwy	Mobile Source	34	Oil production facility	Stationary Source
3	5 Points Intersection	Mobile Source	35	On/Off Ramp Traffic	Mobile Source
4	710 Freeway	Mobile Source	36	Phillips 66	Stationary Source
5	91/710 Fwy	Mobile Source	37	Rancho Dominguez High School	Sensitive Receptor
6	Alameda corridor	Mobile Source	38	Rosecrans oil fields	Stationary Source
7	Alondra, Storage Container	More Info Needed	39	SERRF - Waste to Energy	Stationary Source
8	Asphalt Plant	More Info Needed	40	Shell Tank Farm	Stationary Source
9	Bixby Marshlands	More Info Needed	41	Silverado Park	Sensitive Receptor
10	Cabrillo High School	Sensitive Receptor	42	Storage tanks – Rancho LPG Holdings	Stationary Source
11	Carousel Tract	Need More Info	43	Sulfur pile	Stationary Source
12	Carson Logistics	Need More Info	44	Susceptible Residential Area	Sensitive Receptor
13	Carson warehousing district	Mobile Source	45	Terminal Island	Mobile Source
14	Chemical Facility	Stationary Source	46	Traffic - Sepulveda/Avalon	Mobile Source
15	Chemical Storage	Stationary Source	47	Traffic East of Transportation Corridor	Mobile Source
16	Del Amo Elementary	Sensitive Receptor	48	Truck traffic - Harry Bridges	Mobile Source
17	Dolphin Park	Sensitive Receptor	49	Truck traffic - 405/Wilmington	Mobile Source
18	Dominguez Tech/Distribution Area	Need More Info	50	Truck traffic – Terminal Isl. Fwy	Mobile Source
19	Expanding oil wells	Need More Info	51	Valero Refinery	Stationary Source
20	Port - Fueling terminals	Need More Info	52	Ventura Transfer	Mobile Source
21	Harbor UCLA Hospital	Sensitive Receptor	53	Victoria Park	Sensitive Receptor
22	Hazardous Material Sources	Stationary Source	54	Waste Management Transfer Station	Mobile Source
23	ICTF	Mobile Source	55	Wastewater discharge point into harbor	Stationary Source
24	Intermodal facilities	Mobile Source	56	Wastewater treatment facility	Stationary Source
25	Kinder Morgan	Mobile Source	57	Warehouses, Watson Land Corps	Mobile Source
26	LA/Long Beach Port	Mobile Source	58	Wilmington oil fields	Stationary Source
27	Cement/Gravel Yard – Sir Mix Concrete Products	Stationary Source	59	Wilmington Senior Center, Cemetery	Sensitive Receptor
28	LGB	Outside Boundary	60	Victoria Golf Course	Sensitive Receptor
29	Miller Children's Hospital, LB Memorial Hospital	Sensitive Receptor	61	Fueling Terminal	Need More Info
30	Marathon/Tesoro Refinery	Stationary Source	62	Rail – Along Eubank	Mobile Source
31	Military installation	Stationary Source	63	Macerich Development	Stationary Source
32	Oil drilling	Stationary Source			

Figure 3-2. List of air quality concerns identified by the WCWLBCSC and members of the public

The South Coast AQMD develops and enforces air pollution regulations to improve air quality and protect public health. Many South Coast AQMD rules are related to a specific type of operation or pollution source. Figure 3-3 describes the number of facilities in this community that are subject to some key South Coast AQMD rules to control metal air pollution. The figure also includes information about facilities that are in key state and federal programs, which include major sources of air pollution or other types of environmental pollution.

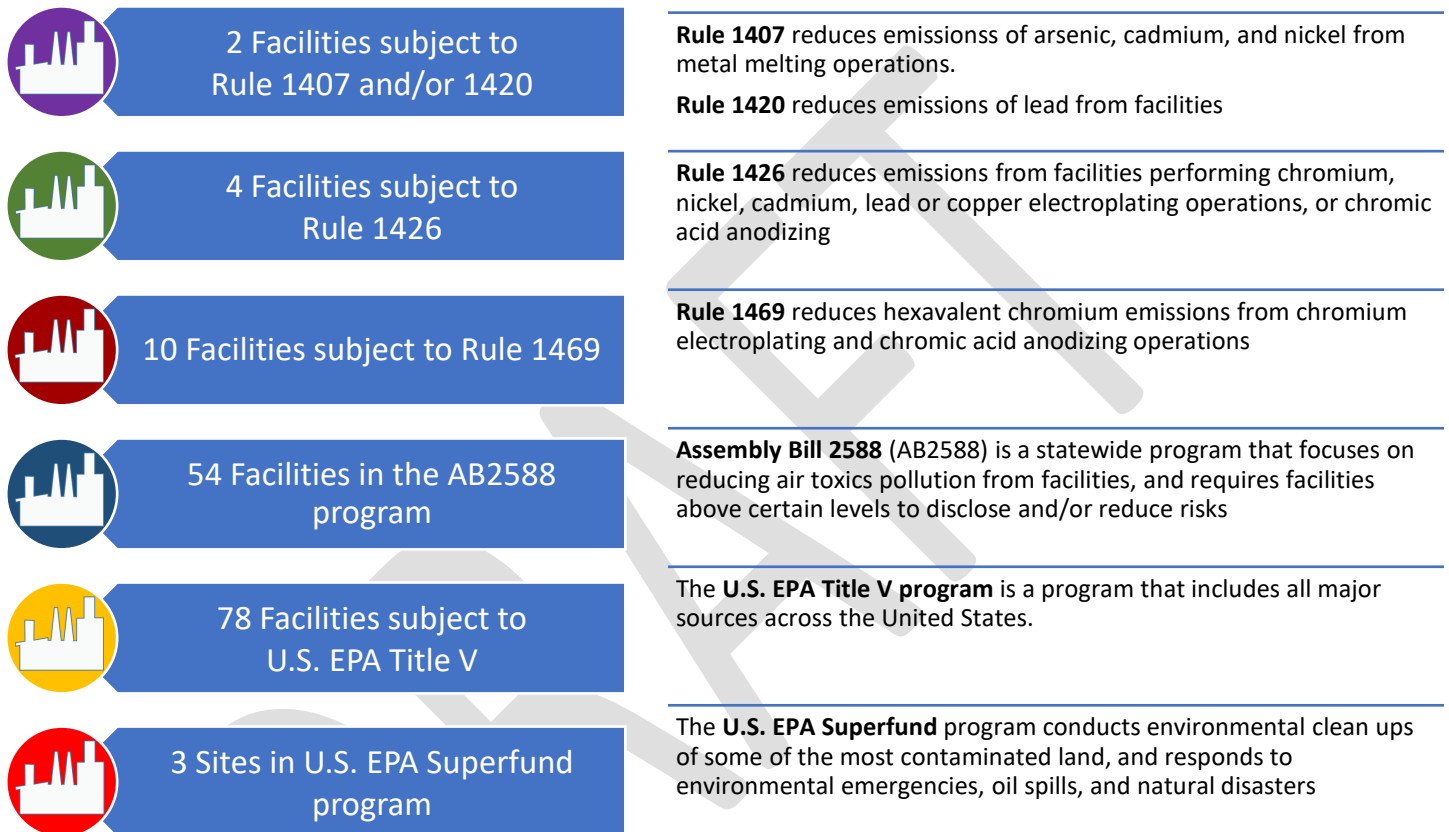


Figure 3-3. Key stationary sources in the Wilmington, Carson, West Long Beach community, by regulatory program

The following air quality priorities for the CERP were identified by the CSC and members of the public for the Wilmington, Carson, and West Long Beach community:

- Refineries
- Ports
- Neighborhood Truck Traffic
- Oil Drilling and Production
- Schools and Homes
- Railyards

Actions to address each of these air quality priorities are described in Chapter 5.

Community Air Pollution Profile and Related Data

Understanding what air pollution sources exist in the community and what air pollutants come from these sources helps identify key sources that can be addressed through CERP actions. This section presents data based on previous cumulative impact studies to describe the impacts of toxic air pollutants in this community, as well as other environmental pollution, as well as public health factors and social and economic factors that make people more sensitive or vulnerable to the health effects of pollution.

The Wilmington, Carson, West Long Beach community is shown in Figure 3-1. The land area of this community is 71.86 mi². About 25% of this land area is used for residential living, 25% is zoned for industrial uses, and 23% is used for freeways, roadways, and land used for utilities and communications services.²

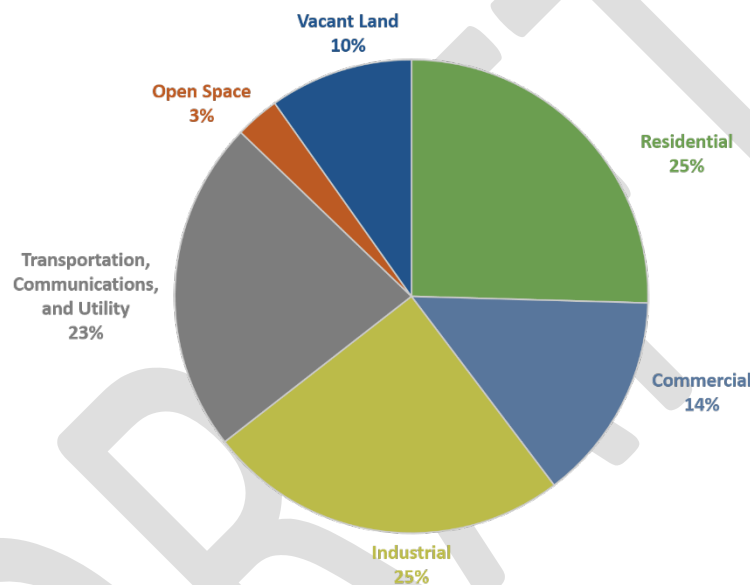


Figure 3-4. Land use profile in Wilmington, Carson, West Long Beach

Air toxics are one group of air pollutants that can affect public health on a local community scale. This includes pollutants from diesel exhaust, metal air pollutants (e.g. hexavalent chromium, lead, arsenic, nickel, etc), and gases (e.g. benzene, formaldehyde, etc). The South Coast AQMD conducts the Multiple Air Toxics Exposure Study (MATES) every few years to understand the cumulative health impacts of air toxics in communities across the region. The most recently completed study was MATES IV, which was conducted in 2012-2013, and used air toxics monitoring, emissions inventories, modeling, and health risk assessment techniques to calculate the cancer risk due to toxic air pollutants (“air toxics cancer risk”).³ Based on MATES IV modeled data, approximately three-quarters of the air toxics cancer risk in

² Land use refers to how certain areas of land are classified for development and use. Land use data is often used for city or county planning, such as the placement of housing developments and transportation hubs. Land use data is derived from the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/ Sustainable Communities Strategy, which is based on 2012 data.

³ More information regarding MATES IV and the final report can be found on SCAQMD’s website at: <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/matesiv>.

the Basin is due to diesel particulate matter (Figure 3-5). The air toxics cancer risk in the Wilmington, Carson, West Long Beach community is much higher than the average in the Basin, and it is also dominated by diesel particulate matter.

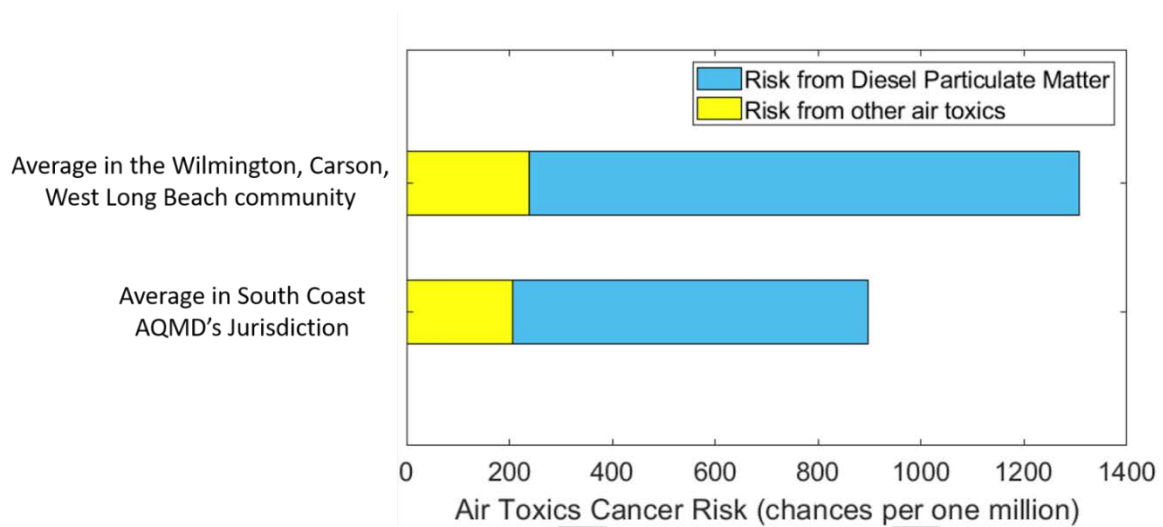


Figure 3-5. Air toxics cancer risk, based on MATES IV modeled data

Mobile sources include trucks, ships, trains, cars, buses, and other mobile equipment. Much of this equipment is powered by diesel, which is the air toxic pollutant with the highest impact in this community. The community includes more than 40 miles of freeways, 2 marine ports (which are the two largest container ports in the United States), and 9 railyards⁴, including two railyards that are located near residential areas (Figure 3-6).

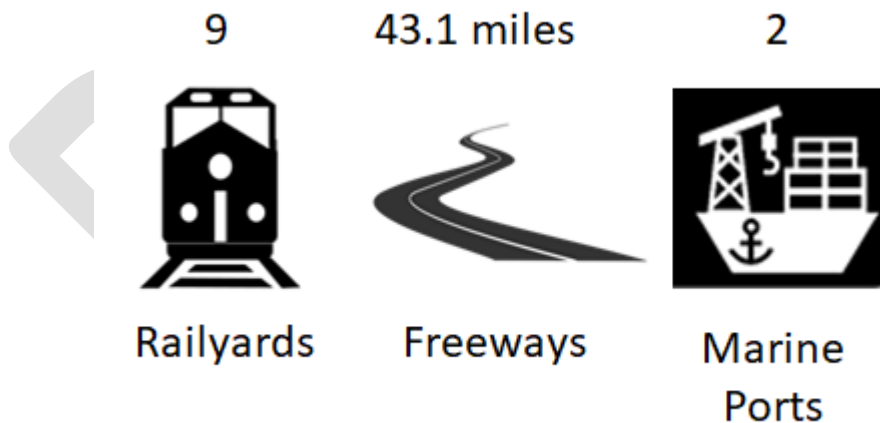


Figure 3-6. Diesel mobile sources in Wilmington, Carson, West Long Beach

Understanding the community’s public health and socioeconomic profile helps to provide context for the work being done through this CERP. CalEnviroScreen 3.0 is a screening tool developed by the California Office of Environmental Health Hazard Assessment (OEHHA) that is used to identify

⁴ Includes rail terminals, railroad facilities, and freight and passenger maintenance facilities

communities that are most affected by various sources of pollution, and where people are especially vulnerable to pollution’s effects. The CalEnviroScreen 3.0 data show that this community has public health factors, as well as social and economic factors, that make the community more sensitive and vulnerable to the harmful effects of air pollution compared to statewide averages (Figure 3-7 and Figure 3-8). These data show that, on average, the Wilmington, Carson, West Long Beach community has generally worse public health factors and fewer people with more than a high school degree compared to California as a whole. The public health factors specifically show that this community has higher rates of emergency department visits for asthma and heart disease, and more babies born low weight, compared to statewide averages.

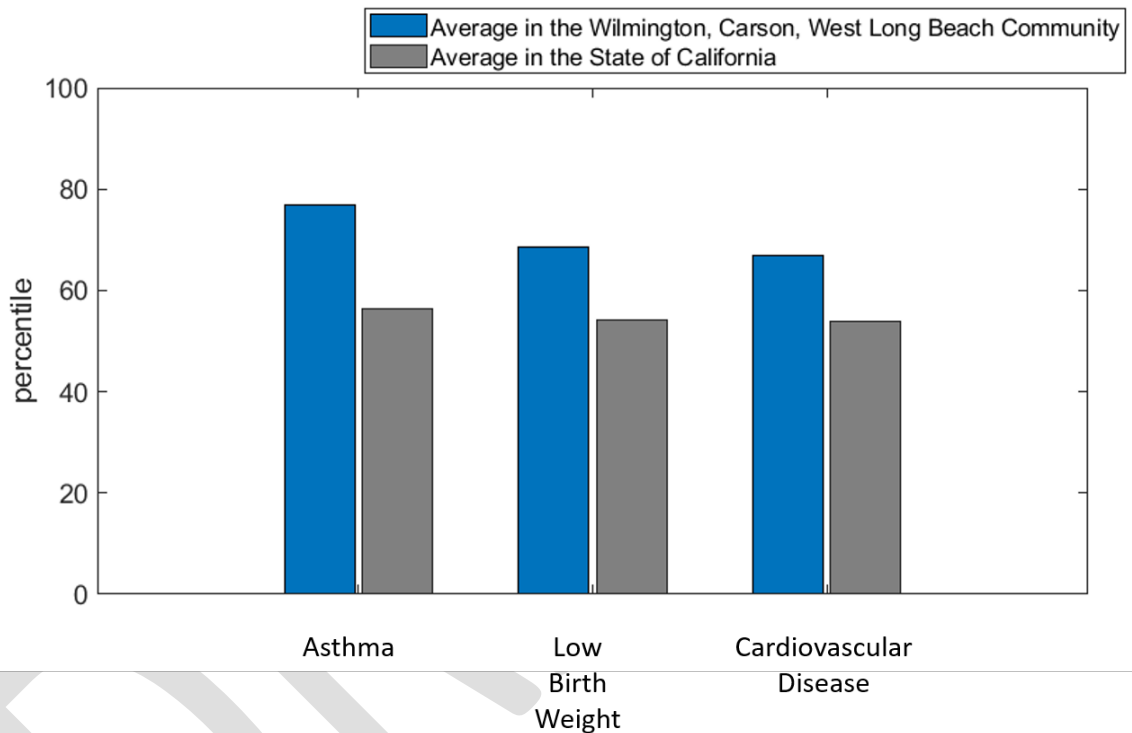


Figure 3-7. CalEnviroScreen 3.0 scores for public health factors in Wilmington, Carson, West Long Beach compared to statewide averages

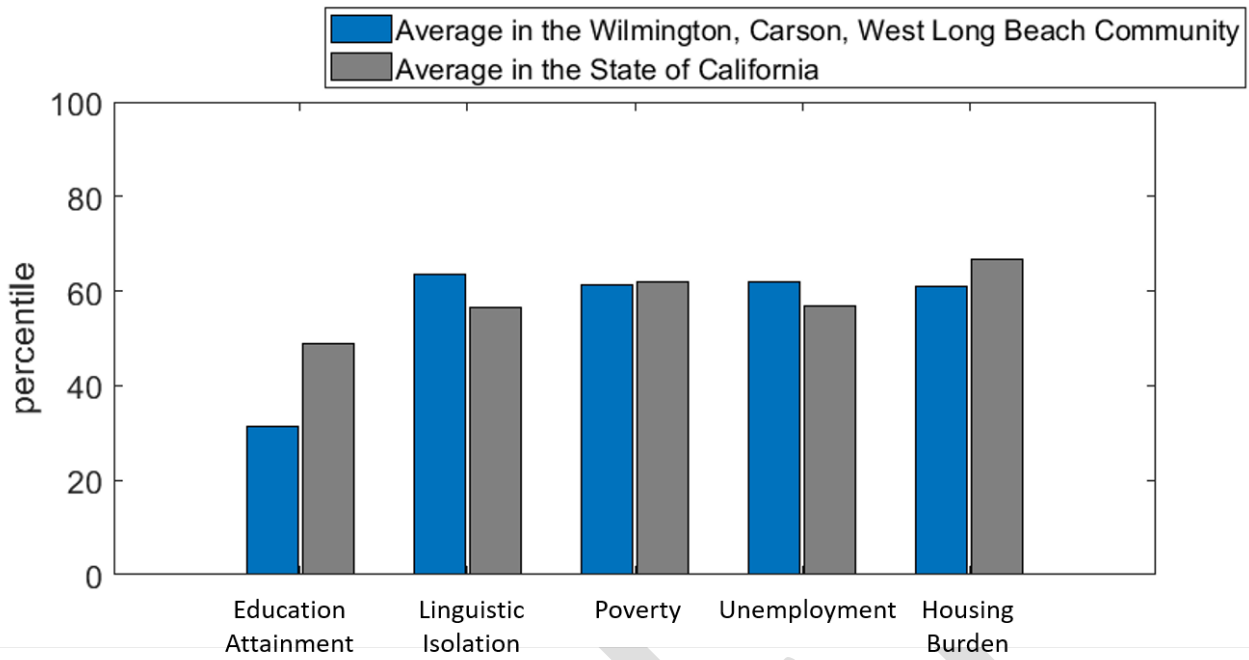


Figure 3-8. CalEnviroScreen 3.0 scores for social and economic factors in Wilmington, Carson, West Long Beach compared to statewide averages⁵

[Emissions Inventory and Source Attribution analysis to follow in this section]

⁵ The statewide average may not be at the 50th percentile because it is a population-weighted average. The average depends on both the distribution of population and the distribution of the number of each factor, and both these factors are not symmetrical.