

Chapter 3a: 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 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 Emissions Reduction Plan (CERP) actions described in Chapter 5.

Chapter 3 Highlights

- The community profile is based upon 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; and both social and economic factors in the community provide useful background information
- Information about the sources of air pollution in the community is presented in a “source attribution” analysis (Chapter 3b)

Community Boundary, Air Quality Concerns, and Air Quality Priorities

During 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?
- Additional **feedback on the Draft CERP**

The process is summarized in Table 3a-1. CSC members discussed which geographic areas should be included within the community boundary (Figure 3a-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 community members spend time (e.g., schools, residential areas, community centers, hospitals, etc.). 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 webpage.ⁱ CSC members also provided additional air quality concerns by email and other conversations; these concerns were added to the map shown (Figure 3a-1) and listed (Figure 3a-2). A list of additional concerns were posted to the webpage.

Air quality concerns were grouped into categories (e.g., refineries, truck traffic, oil and gas extraction, etc.) and CSC members, as well as the public prioritized the top air quality concerns to be addressed 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.

The work to implement the CERP and Community Air Monitoring Plan (CAMP)¹ is dynamic, thus certain action items have been written with built-in flexibility to permit necessary adjustments as new information becomes available. South Coast AQMD staff is committed to working with CSC members to evaluate ongoing actions and progress.

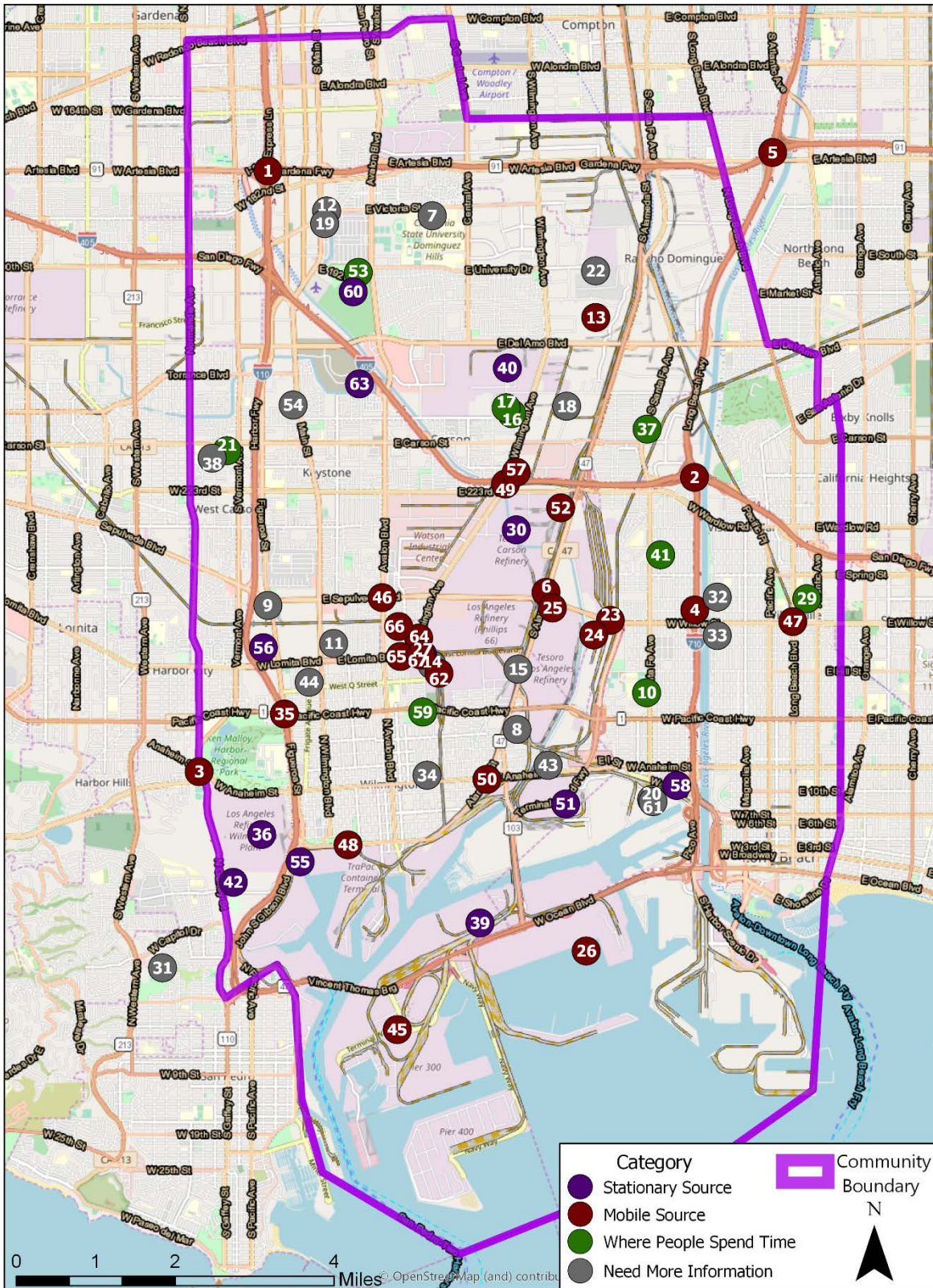
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ⁱ Interactive map of air quality concerns in the Wilmington, Carson, West Long Beach community: <https://scaqmd-online.maps.arcgis.com/apps/View/index.html?appid=534f48ca127c430abb1a5f4f6e86cf00&extent=-118.5536,33.6686,-117.8945,33.9359>

Table 3a-1: Process of CSC input on CERP elements

CSC Meeting	Discussion Topic(s)	CSC Input	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 3a-1: Map of air quality concerns identified by the Wilmington, Carson, West Long Beach CSC and members of the public



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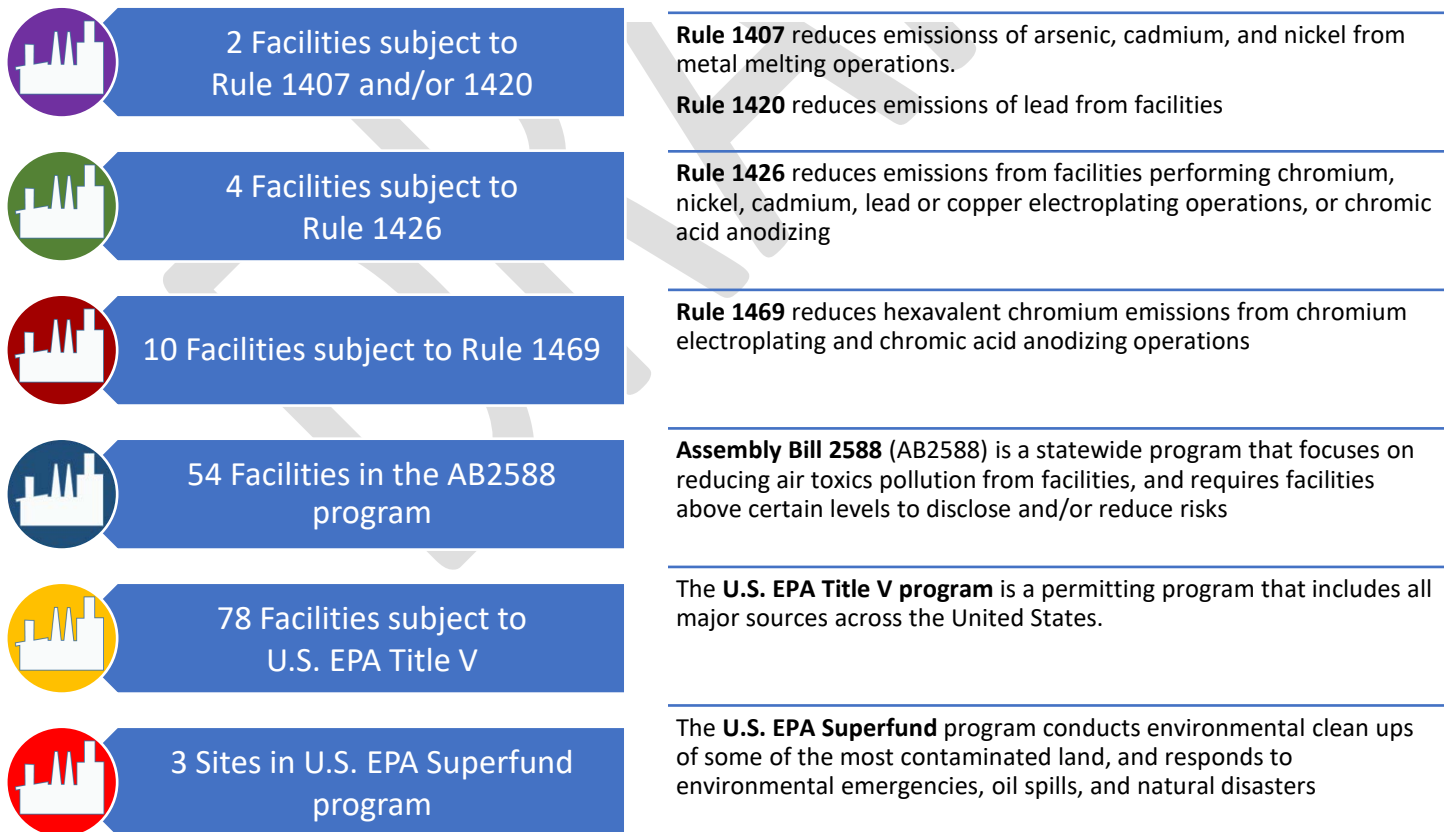
Figure 3a-2: List of air quality concerns identified by the Wilmington, Carson, West Long Beach CSC and members of the public

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

Label	Concern Name	Category	Label	Concern Name	Category
29	Miller Children's Hospital, LB Memorial Hospital	Sensitive Receptor	63	Macerich Development	Stationary Source
30	Marathon/Tesoro Refinery	Stationary Source	64	Wilmington Ave. at Rail Crossing	Mobile Source
31	Military installation	Stationary Source	65	E. Lomita Blvd.	Mobile Source
32	Oil drilling	Stationary Source	66	Lackme Ave. Near Rail Crossing	Mobile Source
33	Oil drilling	Stationary Source	67	Lomita Blvd./Eubank Ave. Truck Traffic	Mobile Source
34	Oil production facility	Stationary Source			

The South Coast AQMD develops and enforces air pollution regulations to reduce emissions, improve air quality, and protect public health. Many South Coast AQMD rules are related to a specific type of operation or pollution source. Figure 3a-3 describes the number of facilities in this community that are subject to some key South Coast AQMD rules to control emissions from facilities processing metals. The figure also includes information about facilities that are in key state and federal programs, which includes major sources of air pollution or other types of environmental pollution. Appendix 3a also provides a list of facilities in the community that have prior and/or ongoing AB 2588 risk reduction plans.

Figure 3a-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, West Long Beach community:

- Refineries
- Ports
- Neighborhood Truck Traffic
- Oil Drilling and Production
- Railyards
- Schools, Childcare Centers, and Homes – Exposure Reduction

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

The South Coast AQMD and the California Air Resources Board (CARB) both develop and enforce air pollution regulations to improve air quality and protect public health. While CARB has primary authority over mobile sources, the South Coast AQMD has authority over stationary sources and “indirect sources”, which are facilities that attract mobile sources. Examples of indirect sources include warehouses and railyards. Specific information about ongoing rule development that is relevant to these air quality priorities is provided in Chapter 5.

Community Air Pollution Profile and Related Data

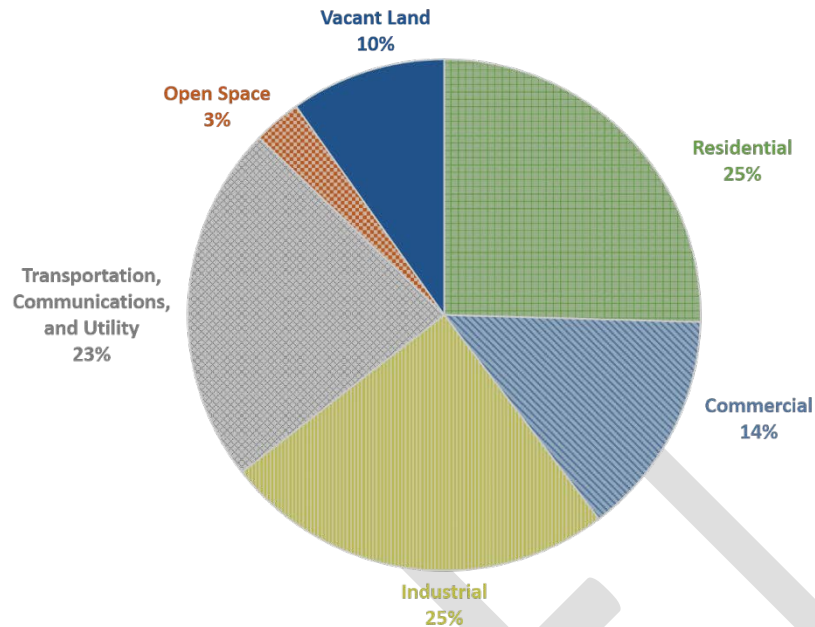
Understanding what air pollution sources exist in the community and what air pollutants come from these sources helps identify key sources that can be addressed through CERP actions. This section presents data based on previous cumulative impact studiesⁱⁱ to describe the impacts of toxic air pollutants in this community, as well as other environmental pollution, public health factors, and social and economic factors that make people more sensitive or vulnerable to the health effects of pollution.²

The Wilmington, Carson, West Long Beach community is shown in Figure 3a-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 (Figure 3a-4).ⁱⁱⁱ

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

ⁱⁱⁱ 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.

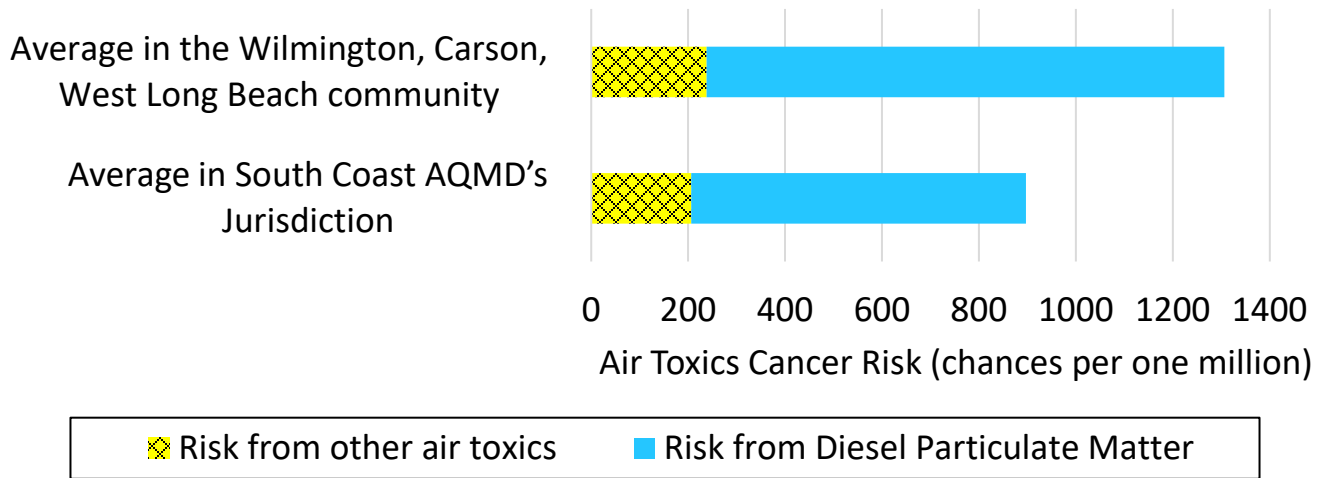
Figure 3a-4: Land use profile in Wilmington, Carson, West Long Beach



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 particulate 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”).^{iv} MATES V is currently in progress. Based on MATES IV modeled data, approximately three-quarters of the air toxics cancer risk in the Basin is due to diesel particulate matter (Figure 3a-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.

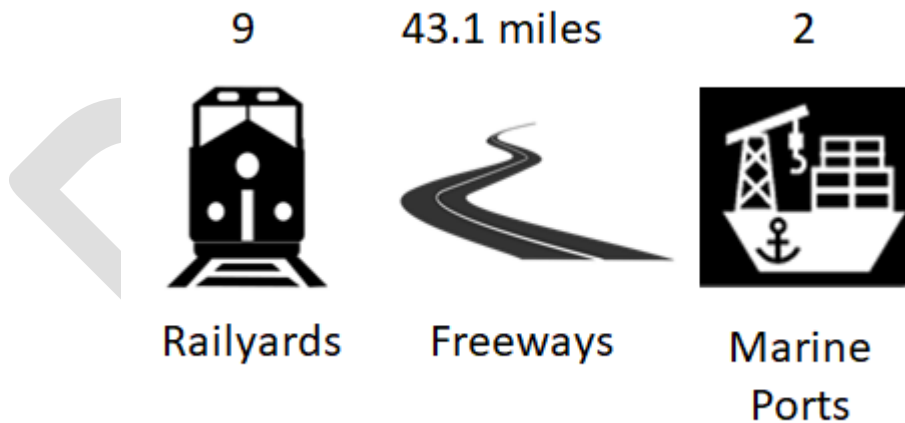
^{iv} More information regarding MATES IV and the final report can be found on South Coast AQMD’s website at: <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/matesiv>.

Figure 3a-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 railyards,^v including two railyards that are located near residential areas (Figure 3a-6).

Figure 3a-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 communities that are most affected by various sources of pollution, and where people are especially vulnerable to the effects of pollution. 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

^v Includes rail terminals, railroad facilities, and freight and passenger maintenance facilities

vulnerable to the harmful effects of air pollution compared to statewide averages (Figure 3a-7 and Figure 3a-8). These data show that, on average, the Wilmington, Carson, West Long Beach community has generally worse public health factors and more social and economic disadvantages 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 with a low weight in comparison to statewide averages.

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

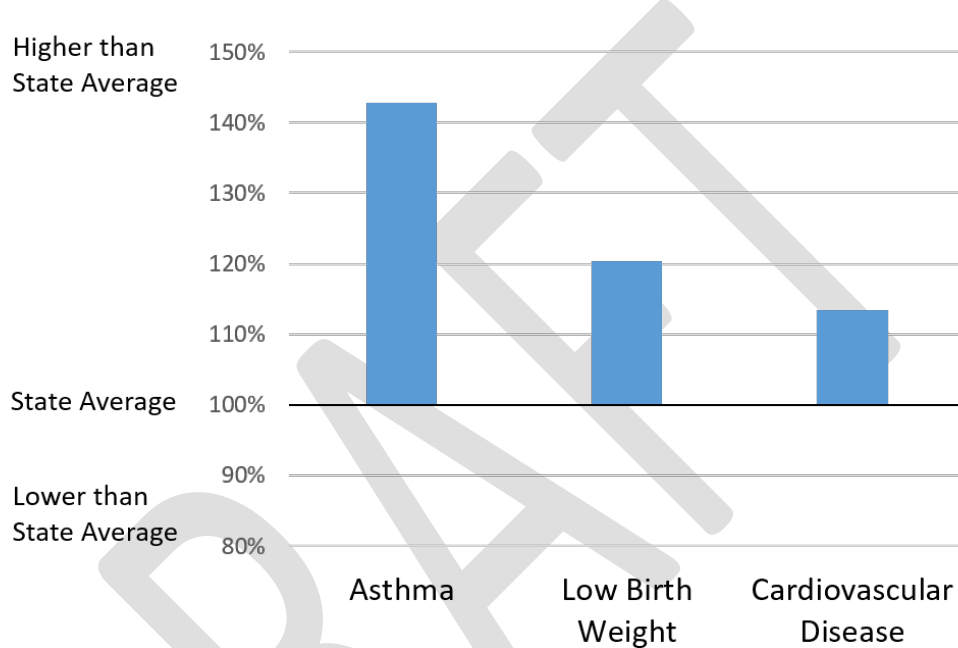
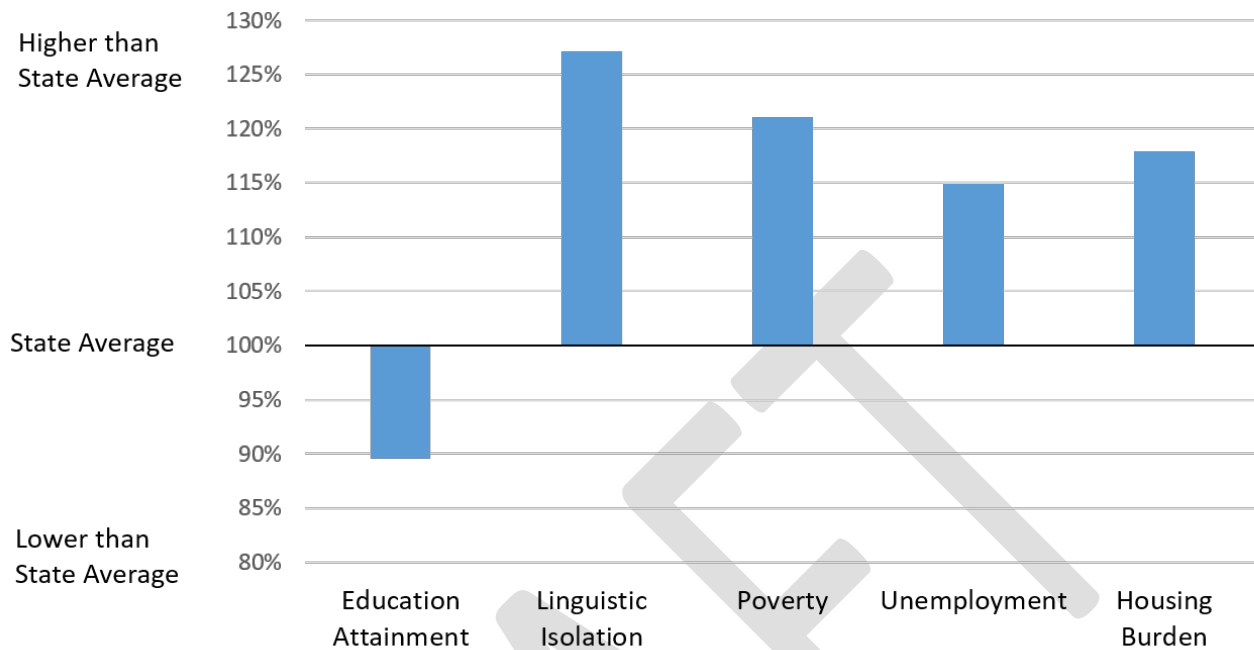


Figure 3a-8: CalEnviroScreen 3.0 scores for social and economic factors in Wilmington, Carson, West Long Beach compared to statewide averages^{vi}



References

1. South Coast AQMD, Community Air Monitoring Plan (CAMP) for the Wilmington, Carson, West Long Beach, http://www.aqmd.gov/docs/default-source/ab-617-ab-134/camps/wcwlb_camp.pdf, Accessed July 2019.
2. Office of Environmental Health Hazard Assessment, CalEnviroScreen 3.0, <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>, Accessed June 2019.

^{vi} 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.