

## 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 San Bernardino and Muscoy (SBM) 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, and 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. CSC members discussed which geographic areas should be included within the community boundary, shown in Figure 3-1. The San Bernardino and Muscoy CSC established two distinct community boundaries to represent this community for the purpose of AB 617 community plan implementation. The “Impacted Community” boundary focuses on the places in the community where people live, work, go to school, and spend the majority of their time. The “Emissions Study Area” boundary includes both the Impacted

Community and additional air pollution sources (e.g. facilities and major truck routes) that may affect the Impacted Community. Regions within and near either 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<sup>1</sup>. These community air quality concerns are shown in Figure 3-1 and listed in Figure 3-2. Most of the concerns identified were within the Emissions Study Area. However, there were several warehouses along the Interstate 10 freeway that were also identified as concerns. While these warehouse are outside the community boundaries, the CSC stated that the trucks going to and from these warehouses drive through the community. Therefore, these trucks are within the Emissions Study Area and can be addressed through the CERP.

Next, the air quality concerns were grouped into categories (e.g. truck traffic, railyards, etc.), and the CSC and members of the public prioritized the top air quality concerns. 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.

Because the work to implement the CERP and CAMP<sup>2</sup> is dynamic, 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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<sup>1</sup> Interactive map of air quality concerns in the San Bernardino and Muscoy community: <https://scaqmd-online.maps.arcgis.com/apps/View/index.html?appid=c1c170ab526d462199b86c1cbe5a9ac5&extent=-117.4450,34.0601,-117.1155,34.1933>

<sup>2</sup> Community Air Monitoring Plan (CAMP) for the San Bernardino and Muscoy community: [http://www.aqmd.gov/docs/default-source/ab-617-ab-134/camps/sbm\\_camp.pdf?sfvrsn=6](http://www.aqmd.gov/docs/default-source/ab-617-ab-134/camps/sbm_camp.pdf?sfvrsn=6)

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 <b>boundaries</b> . Identified community air quality <b>concerns</b> . <u>Outcome</u> : list of air quality concerns	<b>Boundaries</b> were used to define focus area for CERP actions (see Meetings #4-5). <b>Concerns</b> were prioritized for inclusion in Plans (see Meeting #3).
#2 January 2019	Community Boundary	Refined <b>community boundaries</b> . <u>Outcome</u> : community boundary	<b>Boundaries</b> 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 <b>air quality priorities</b> (Meetings #4 and #5)
#4 March 2019	Strategies & Proposed Actions (Part 1)	Ideas for <b>actions</b> 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 <b>priority actions</b> (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 <b>priority actions</b> should be included in CERP. <u>Outcome</u> : list of priority actions for CERP	Feedback on actions were used to finalize the list of <b>priority actions</b> to be included in the <b>Draft CERP</b> .
#7 June 2019	Draft CERP, Goals for each CERP Action (Part 1)	Feedback on <b>Draft CERP</b> . Ideas for specific goals for each CERP action. <u>Outcome</u> : Revised Draft CERP	Feedback on <b>Draft CERP</b> and ideas for specific goals will be used to inform the <b>Draft Final CERP</b> in the Board package.
#8 July 2019	Goals for each CERP Action (Part 2)		
#9 August 2019	Final Discussion of Draft CERP	<b>Final revisions</b> 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 <b>Draft Final CERP</b> that is part of the Board package.

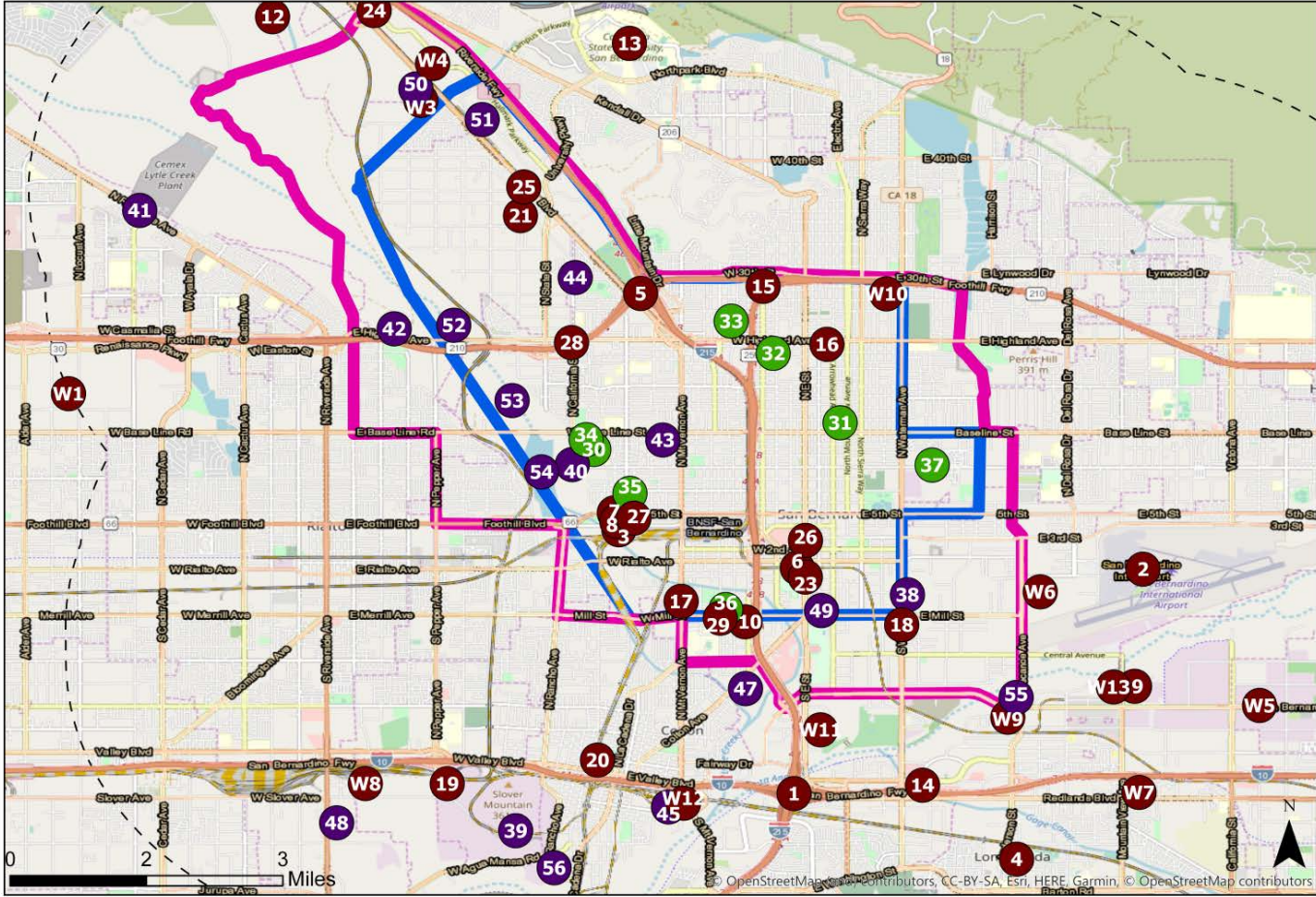


Figure 3-1. Impacted Community and Emissions Study Area boundaries of the San Bernardino and Muscoy community

Label	Concern Name	Category	Label	Concern Name	Category
1	10/215 Fwy Interchange, Along 10 fwy	Mobile Source	36	School – Richardson Pre HI Middle School	Where People Spend Time
2	Airport	Mobile Source	37	Sierra High School, Roberts Elementary School	Where People Spend Time
3	BNSF railyard, JB hunt trucking company	Mobile Source	38	Auto Parts Scrap Yard	Need More Info
4	Construction and Demolition at Loma Linda Campus	Need More Info	39	Cement factory , Cal Portland	Stationary Source
5	Freeway and railway interchange	Mobile Source	40	Cement batch	Stationary Source
6	Metrolink	Mobile Source	41	Cement Facility (CEMEX)	Stationary Source
7	Omnitrans bus yard	Mobile Source	42	Cement manufacturer	Stationary Source
8	Park by BNSF railyard, JB hunt trucking company – Nunez Park	Where People Spend Time	43	Dairy Facility	Need More Info
9	Power Plant – SCE Mountain View	Stationary Source	44	Dust	Need More Info
10	Road Congestion	Mobile Source	45	Ecology Recycling	Stationary Source
11	San Manuel Amphitheater Traffic	Mobile Source	46	Mid-Valley Landfill	Stationary Source
12	The Washland- recreational off roading	Need More Info	47	Meat processing near valley view	Need More Info
13	Traffic at CSUSB	Mobile Source	48	Kinder Morgan Colton Terminal – Phillips 66	Stationary Source
14	Traffic near Hospitality Lane and 10 Fwy	Mobile Source	49	Paint/Auto body shops	Stationary Source
15	Traffic on H Street Exit	Mobile Source	50	Pet Food Facility – Mars Petcare	Stationary Source
16	Traffic	Mobile Source	51	Refinery	Need More Info
17	Mt Vernon Corridor	Mobile Source	52	Surface quarry	Stationary Source
18	Traffic On Waterman	Mobile Source	53	Surface quarry	Stationary Source
19	Train Station	Mobile Source	54	Surface quarry	Stationary Source
20	Trains	Mobile Source	55	East Valley Recycling and Transport	Stationary Source
21	Truck parking in neighborhoods	Mobile Source	56	Water Treatment Plant	Stationary Source
22	Truck parking in neighborhoods	Mobile Source	W1	Medline Warehouse	Mobile Source
23	Truck route	Mobile Source	W2	Fontana warehousing	Mobile Source
24	Truck stop, trucks idling	Mobile Source	W3	New development, warehousing	Need More Info
25	Truck stops	Mobile Source	W4	DCS Logistics	Mobile Source
26	Truck traffic	Mobile Source	W5	Warehouses	Mobile Source
27	Truck traffic Route 66	Mobile Source	W6	Warehouses	Mobile Source
28	Truck idling	Mobile Source	W7	Warehouses	Mobile Source
29	Truck idling near school	Mobile Source	W8	Warehouses	Need More Info
30	Arroyo Valley High School	Where People Spend Time	W9	Warehouses	Mobile Source
31	Lincoln Elementary	Where People Spend Time	W10	Warehouses	Need More Info

32	Neighborhood surrounded by freeways	Where People Spend Time	W11	Warehouses - ICEMA	Mobile Source
33	Neighborhood surrounded by freeways	Where People Spend Time	W12	Railyard Near Warehousing	Need More Info
34	Park - Maple Leaf Park	Where People Spend Time	W13	Warehousing	Mobile Source
35	Ramona Alessandro Elementary	Where People Spend Time			

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

The following air quality priorities for the CERP were identified by the CSC and members of the public for the San Bernardino and Muscoy community:

- Neighborhood truck traffic
- Warehouse on-site emissions
- Omnitrans bus yard
- Railyards
- Concrete batch plants, asphalt and aggregate plants
- Exposure reduction for sensitive populations in schools, community spaces, and homes

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 rail yards. 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 studies<sup>3</sup> 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<sup>4</sup>.

The San Bernardino and Muscoy community is shown in Figure 3-1. The Impacted Community includes a land area of 17.30 square miles, and the Emission Study Area includes an area of 28.58 square miles. About 48% of this land area is used for residential living, 19% is zoned for

<sup>3</sup> 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>.

<sup>4</sup> Office of Environmental Health Hazard Assessment. CalEnviroScreen 3.0. <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

commercial uses, 7% is zoned for industrial uses, and 7% is used for freeways, roadways, and land used for utilities and communications services (Figure 3-3).<sup>5</sup>

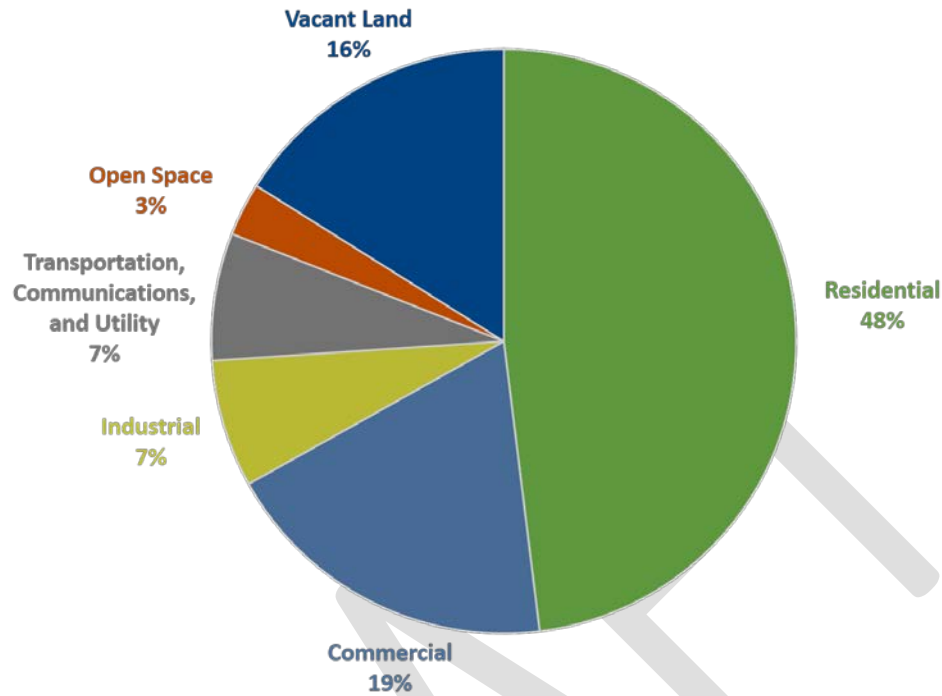


Figure 3-3. Land use profile in San Bernardino and Muscoy

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”).<sup>6</sup> 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 3-4). The average air toxics cancer risk in the San Bernardino and Muscoy community is also shown in the figure, and this risk is also dominated by diesel particulate matter.

<sup>5</sup> 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.

<sup>6</sup> 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>.

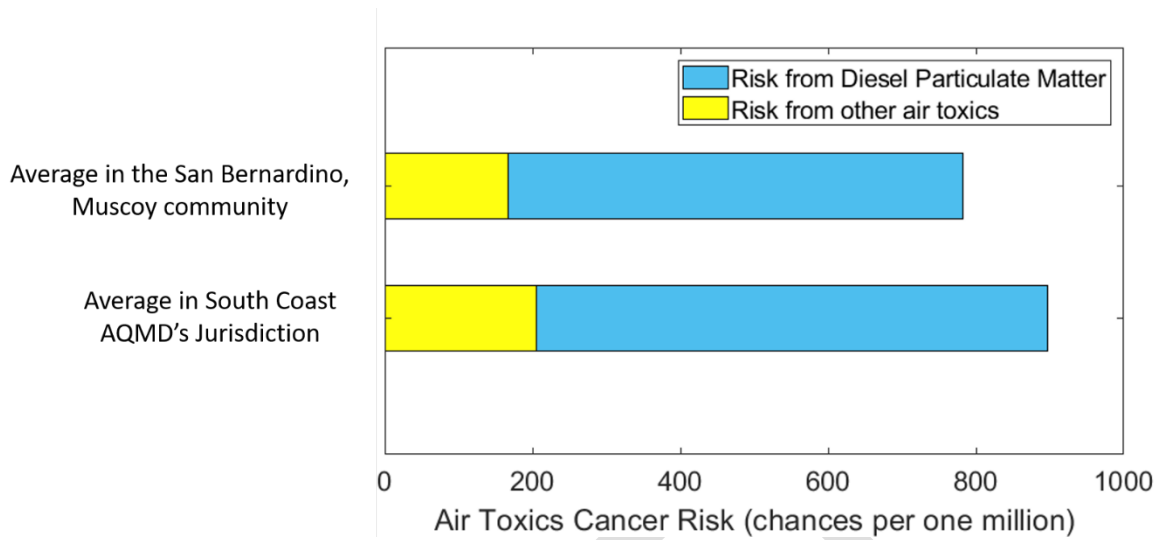


Figure 3-4. Air toxics cancer risk, based on MATES IV modeled data

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 22 miles of freeways and 5 railyards<sup>7</sup>, including a railyard that is located near residential areas (Figure 3-5)

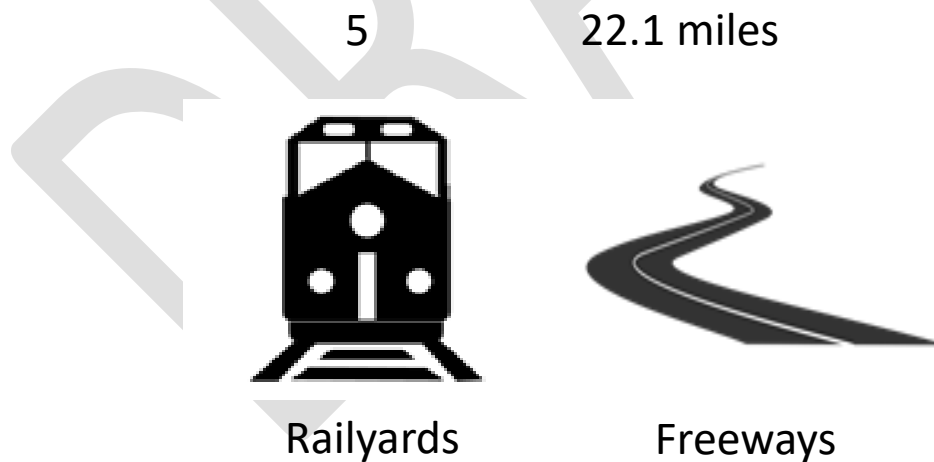


Figure 3-5. Diesel mobile sources in San Bernardino and Muscoy

<sup>7</sup> Includes one intermodal railyard, and 4 maintenance yards. All 5 facilities are located west of the Interstate 215 freeway, south of W. 5<sup>th</sup> Street, and north of Rialto Avenue.



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 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 3-6 and Figure 3-7). These data show that, on average, the San Bernardino and Muscoy 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 low weight, compared to statewide averages.

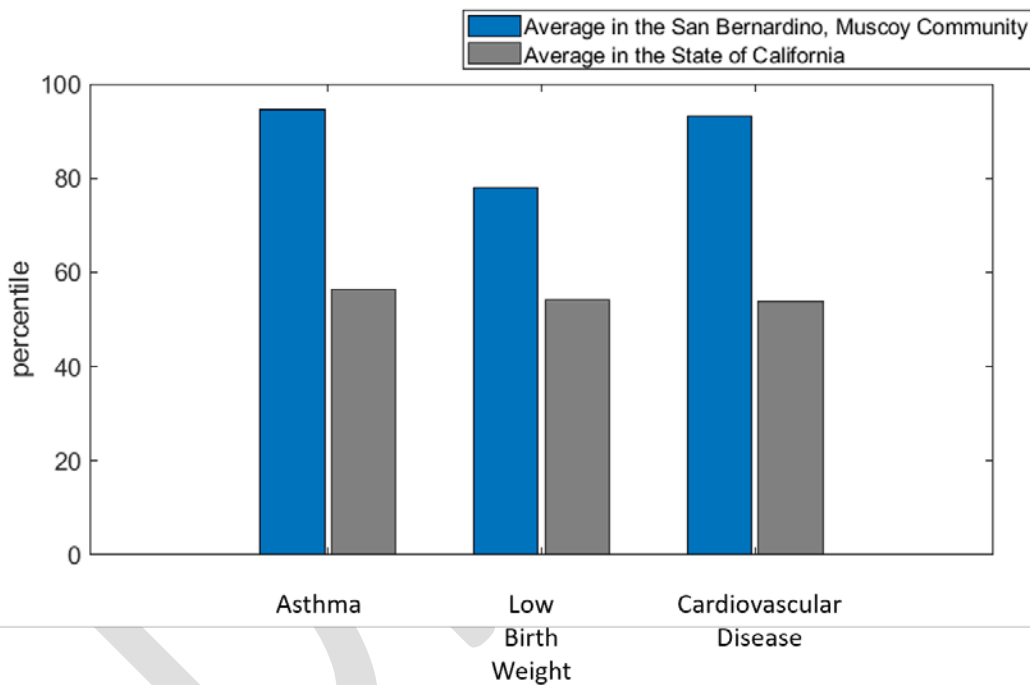


Figure 3-6. CalEnviroScreen 3.0 scores for public health factors in San Bernardino and Muscoy compared to statewide averages

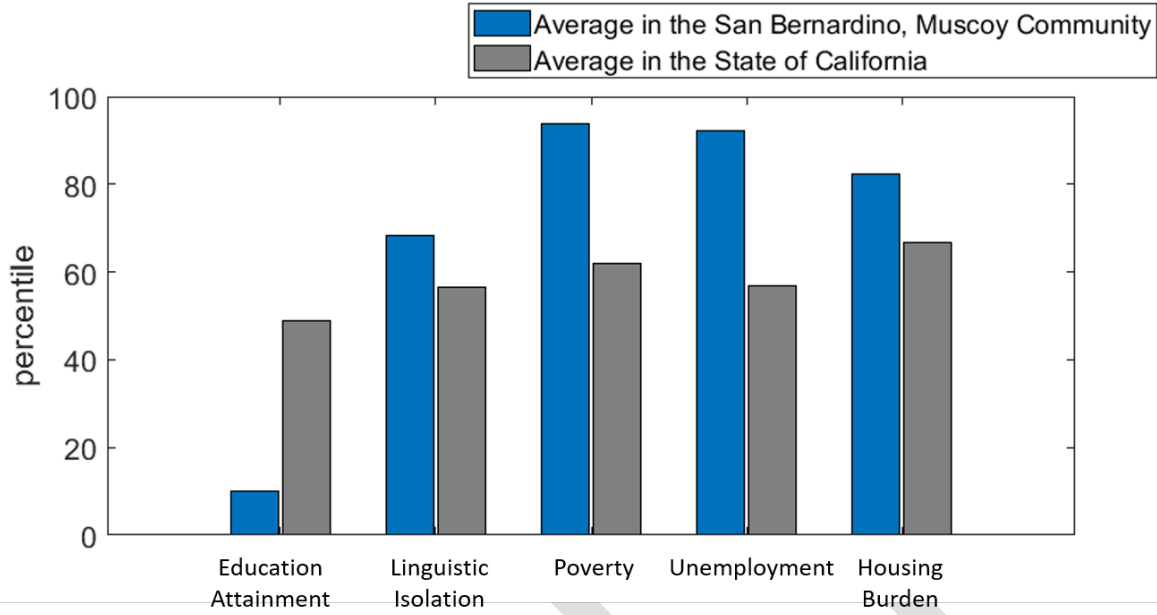


Figure 3-7. CalEnviroScreen 3.0 scores for social and economic factors in San Bernardino and Muscoy compared to statewide averages

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

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