



Chapter 8

Environmental Justice Communities

- The impacts of air pollution are not distributed equitably throughout the South Coast AQMD jurisdiction, with some communities bearing much higher air pollution burdens.
- The 2022 AQMP includes control measures to reduce the levels of ozone – a regional pollutant. The South Coast AQMD, however, addresses disproportionate impacts of local air pollution in disadvantaged communities through the AB 617 program.
- While Environmental Justice (EJ) communities typically experience the same or lower levels of ozone than other parts of the region, these communities see higher PM2.5 levels and higher cancer risks from air toxics.
- Measures associated with the 2022 AQMP will help reduce air pollution in disproportionately impacted areas.
- In the implementation of both existing and future incentive programs, the South Coast AQMD will continue to prioritize EJ areas to address the issues of the most disadvantaged communities.

In This Chapter

- **Introduction** **8-1**
Overview and purpose
- **Environmental Justice Communities** **8-43**
Air quality and disparities
- **Assembly Bill 617** **8-54**
Community air protection program
- **Emissions in Environmental Justice Communities** **8-76**
Baseline and future emissions
- **Air Quality in Environmental Justice Communities** **8-141**
Ambient air pollution levels in 2015-2017
- **8-Hour Ozone Attainment in AB 617 and Environmental Justice Communities** **8-2015**
Model-predicted ozone levels in 2037
- **Environmental Justice Advisory Group** **8-2116**
Overview of environmental justice efforts
- **Incentives and Funding in Environmental Justice Communities** **8-2217**
Incentive programs to reduce emissions

Introduction

Environmental Justice (EJ) communities are disproportionately impacted by various types of pollution and experience health, social, and economic inequities. These inequities can also make residents of EJ communities more vulnerable to the effects of environmental pollution. These communities are often located near multiple air pollution sources including both mobile sources and commercial and industrial facilities. For example, communities adjacent to ports, rail yards and warehouses are exposed to higher levels of emissions from the associated ships, trains, and trucks, including diesel particulate matter, a carcinogen. Communities near refineries and other industries can also suffer from higher levels of air pollution.

The California Office of Environmental Health Hazard Assessment (OEHHA) developed the California Communities Environmental Health Screening Tool (CalEnviroScreen) to identify disadvantaged communities across California based on pollution exposure and population characteristics. This information can be used to advise and assist South Coast Air Quality Management District (South Coast AQMD) in protecting and improving public health in the most impacted communities through the reduction and prevention of air pollution. While there is no universal definition for what constitutes an EJ community, one that is commonly used is the Senate Bill (SB) 535 definition of disadvantaged communities (DACs).¹ These are defined as:

1. Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0 (1,984 tracts).
2. Census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores (19 tracts).
3. Census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0 (307 tracts).
4. Lands under the control of federally recognized Tribes.

All calculations and maps in this chapter that refer to EJ communities are consistent with this definition. “25% highest scoring census tracts in CalEnviroScreen” along with “22 census tracts that score in the highest 5% of CalEnviroScreen’s Pollution Burden, but do not have an overall CalEnviroScreen score because of unreliable socioeconomic or health data.”² At the time the analysis was conducted for this chapter, CalEnviroScreen 4.0 results were available, but the final SB535 designated areas based on CalEnviroScreen 4.0 data were not yet available. In order to use the most recent CalEnviroScreen analysis, EJ communities were defined as the 25% highest scoring census tracts based on CalEnviroScreen 4.0. The map of disadvantaged communities that are within the Basin and the Coachella Valley is presented in Figure 8-1.

¹ <https://oehha.ca.gov/calenviroscreen/sb535>.

² <https://oehha.ca.gov/calenviroscreen/sb535>.

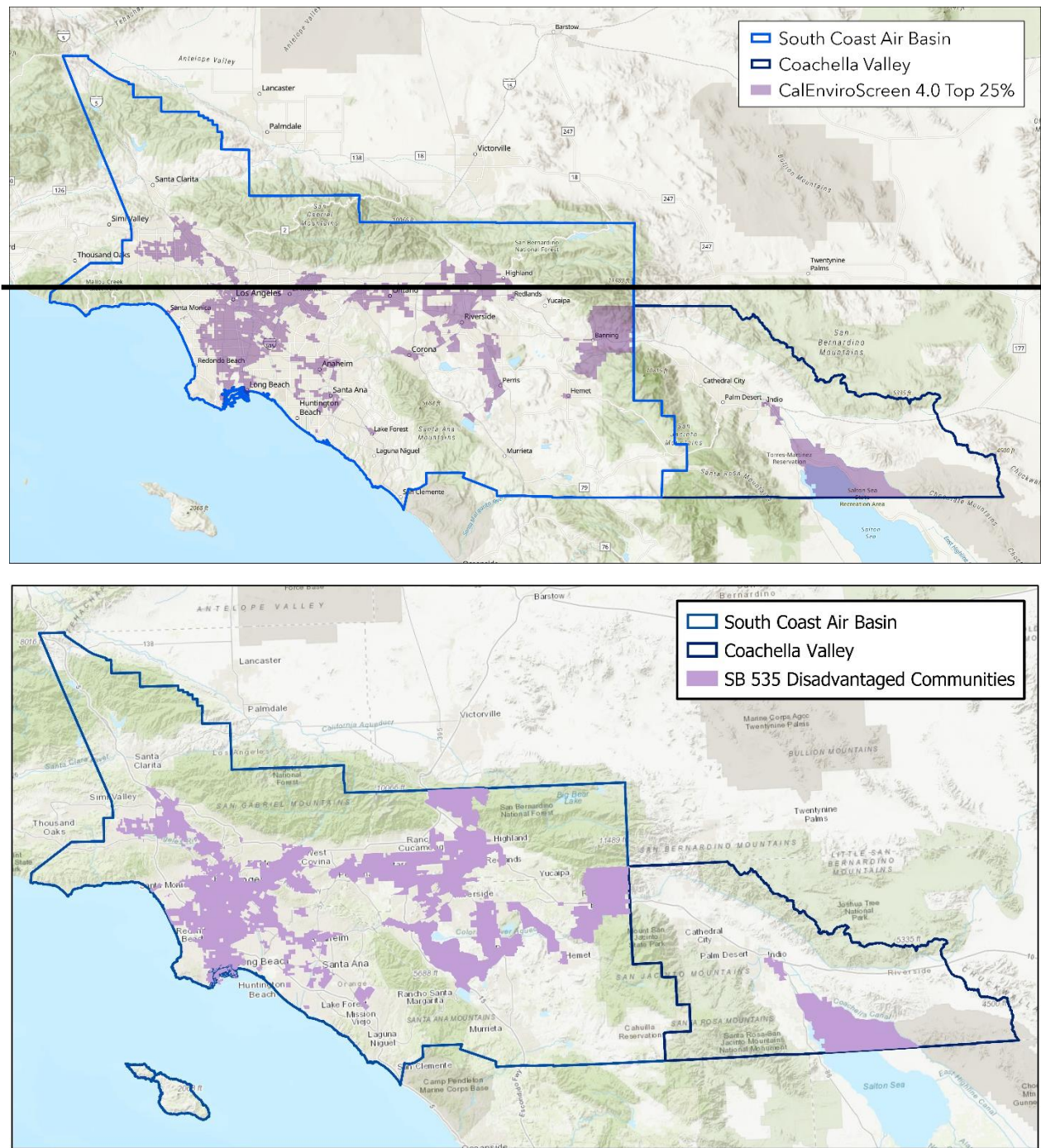


FIGURE 8-1

MAP OF CALENVIROSCREEN 4.0 TOP 25% TRACTS SB 535 DISADVANTAGED COMMUNITIES WITHIN THE SOUTH COAST AIR BASIN AND COACHELLA VALLEY.

The 2022 Air Quality Management Plan (AQMP) is a plan focused on steps needed to attain the 2015 8-hour ozone standard. Ozone is a regional pollutant, meaning that it is formed by emissions from sources on a regional level, and the highest levels of ozone are typically measured downwind of emission sources.

As further described in this chapter, environmental justice communities typically experience similar or even lower levels of ozone than other areas in the South Coast Air Basin (Basin). This is because they are mostly located upwind of areas where we see peak levels of ozone formation. However, efforts to achieve the Nitrogen Oxides (NOx) emission reductions will reduce ozone and fine particulate matter (PM2.5) levels, benefiting EJ communities. Transitioning to zero emission technologies where feasible and the cleanest available technologies where zero emission technologies are not feasible, will substantially reduce emissions of diesel particulate matter, a powerful cancer-causing pollutant, and other mobile source pollutants. As shown in Figure 8-2 below, the highest levels of air toxics risk are around our ports, rail yards, and major transportation corridors, where many of our EJ communities are located. About 88% of those risks are from pollutants associated with mobile sources, with diesel particulate matter alone accounting for about half of those risks. Cleaning up emissions from truck, ship, locomotive, and aircraft fleets will therefore substantially reduce health risks from air pollution in impacted communities, while also putting the region on a path to meet federal air quality standards.

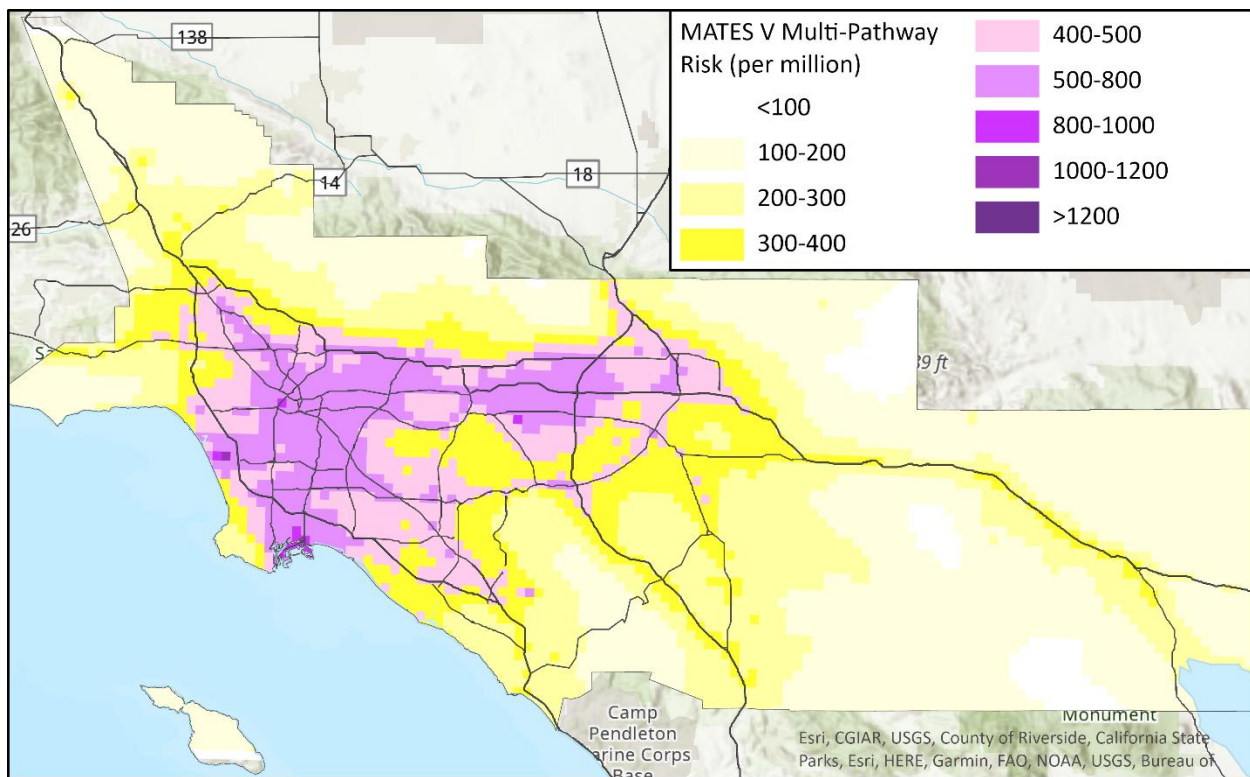


FIGURE 8-2
MODELED MULTI-PATHWAY AIR TOXICS CANCER RISK FROM MATES V (2018 BASE YEAR)³

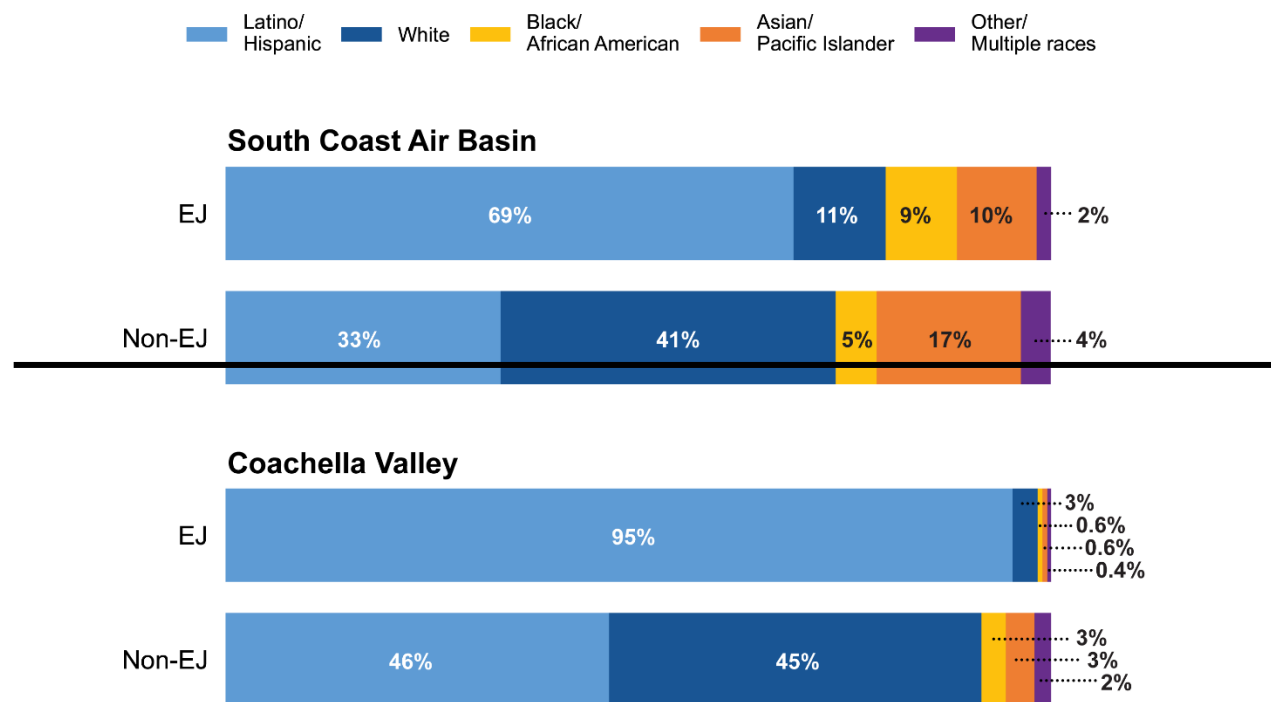
The purpose of this chapter is to describe air quality impacts experienced in EJ communities and outline some of the steps South Coast Air Quality Management District (South Coast AQMD) is taking to address localized impacts. While the work described in this chapter will help reduce localized impacts, we know that this work is ongoing, and much more will need to be done to address historic environmental injustice.

³ <http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf?sfvrsn=6>.

We are committed to continuing our work with impacted communities, listening to their concerns, and to the greatest extent possible, addressing their concerns.

Environmental Justice Communities

Environmental Justice, or "EJ" has been defined by South Coast AQMD as "equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution." While there are many approaches for identifying EJ communities, throughout this AQMP, we use the ~~top 25% highest scoring census tracts in CalEnviroScreen 4.0 definition of disadvantaged communities defined under SB 535.~~ By that definition, approximately ~~37~~⁴² percent of South Coast Air Basin residents and ~~8~~¹¹ percent of Coachella Valley residents live in EJ communities in the South Coast AQMD jurisdiction. Race and ethnicity are not included in the CalEnviroScreen population indicators, but as discussed in the OEHHA Analysis of Race/Ethnicity and CalEnviroScreen results,⁴ people of color disproportionately reside in highly impacted communities in California. These disparities are also clear in both the South Coast Air Basin and Coachella Valley, reflecting the impact of institutional and structural racism that has created unequal pollution burdens and health impacts for different groups (Figure 8-3).



⁴ Available online at:

<https://oehha.ca.gov/media/downloads/calenviroscreen/document/calenviroscreen40raceanalysisif2021.pdf>.

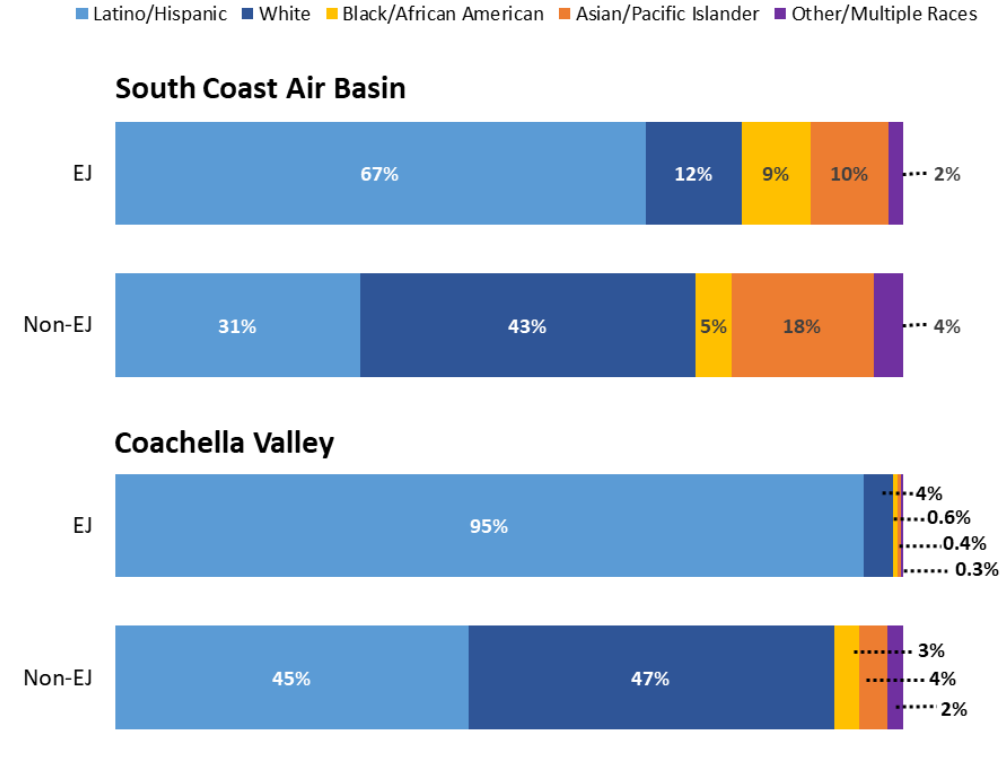


FIGURE 8-3

RACIAL MAKEUP OF EJ AND NON-EJ COMMUNITIES IN THE SOUTH COAST AIR BASIN AND COACHELLA VALLEY.

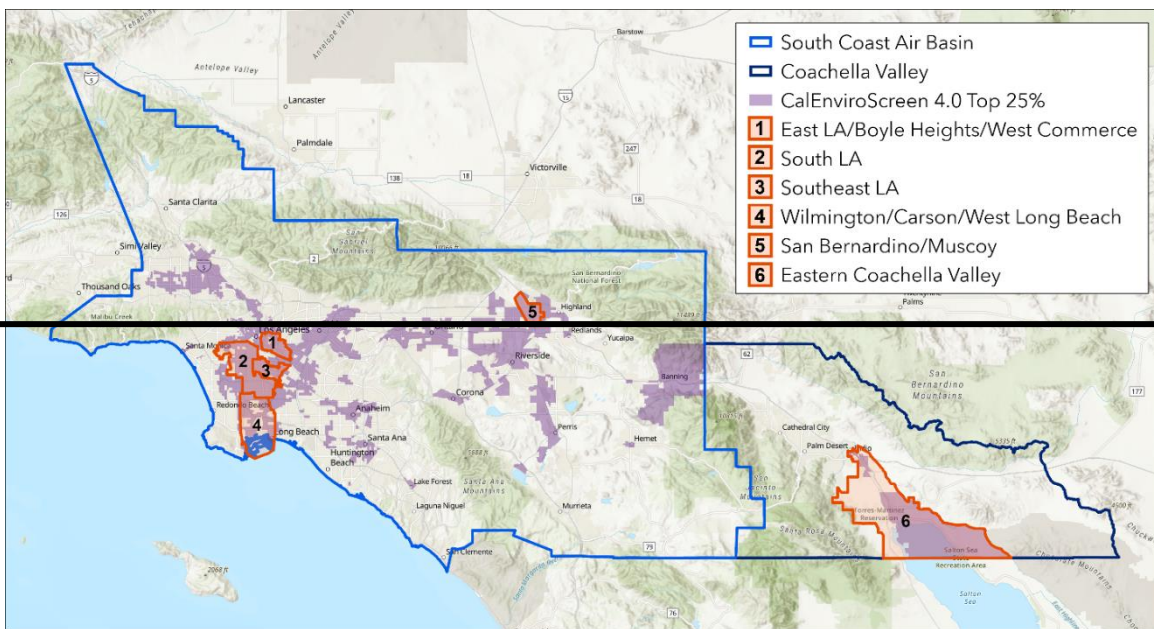
(RACE/ETHNICITY DATA IS FROM CALENVIROSCREEN 4.0 BASED ON 2015-2019 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES FROM THE U.S. CENSUS BUREAU)

Assembly Bill 617

The 2022 AQMP is designed to address regional air pollution, however, the South Coast AQMD recognizes there is still much work to be done to reduce local exposures within EJ communities. Statewide and the South Coast AQMD environmental justice efforts, such as the Assembly Bill 617 (AB 617)⁵ program, seek to collaboratively address environmental challenges in communities that are disproportionately impacted by pollution and more vulnerable to the health effects of pollution. AB 617 was signed into California law on July 26, 2017, and focused on addressing disproportionate impacts of local air pollution in EJ communities. The AB 617 program requires local air districts and California Air Resources Board (CARB) to reduce air pollution in disproportionately burdened communities, improve accountability and transparency, and promote collaborative partnerships with community stakeholders. AB 617 communities are designated by CARB, and they specify the plan(s) for the community as either an emissions reduction program, air monitoring program, or both. To meet the emissions reduction program

⁵ California Health and Safety Code, § 44391.2.

requirements, the South Coast AQMD works with the communities to develop and implement Community Emission Reduction Plans (CERPs). CERPs are specific to each AB 617 community and are intended to address air quality related impacts in those communities. Similarly, for the air monitoring program requirements, the South Coast AQMD works with the communities to develop and deploy Community Air Monitoring Plans (CAMPs). Both the measures associated with the 2022 AQMP and the elements of AB 617 CERPs will help reduce air pollution in disproportionately impacted areas. More detail on the AB 617 program can be found ~~on~~ at the South Coast AQMD’s AB 617 Community Air Initiatives webpage.⁶ To date, there are six designated AB 617 communities in the South Coast AQMD jurisdiction, as shown by Figure 8-4. The East Los Angeles/Boyle Heights/West Commerce community (ELABHWC), San Bernardino/Muscoy community (SBM) and Wilmington/Carson/West Long Beach community (WCWLB) were designated in 2018; the Eastern Coachella Valley community (ECV) and Southeast Los Angeles community (SELA) were designated in 2019; and the South Los Angeles community (SLA) was designated in 2020.



⁶ <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134>.

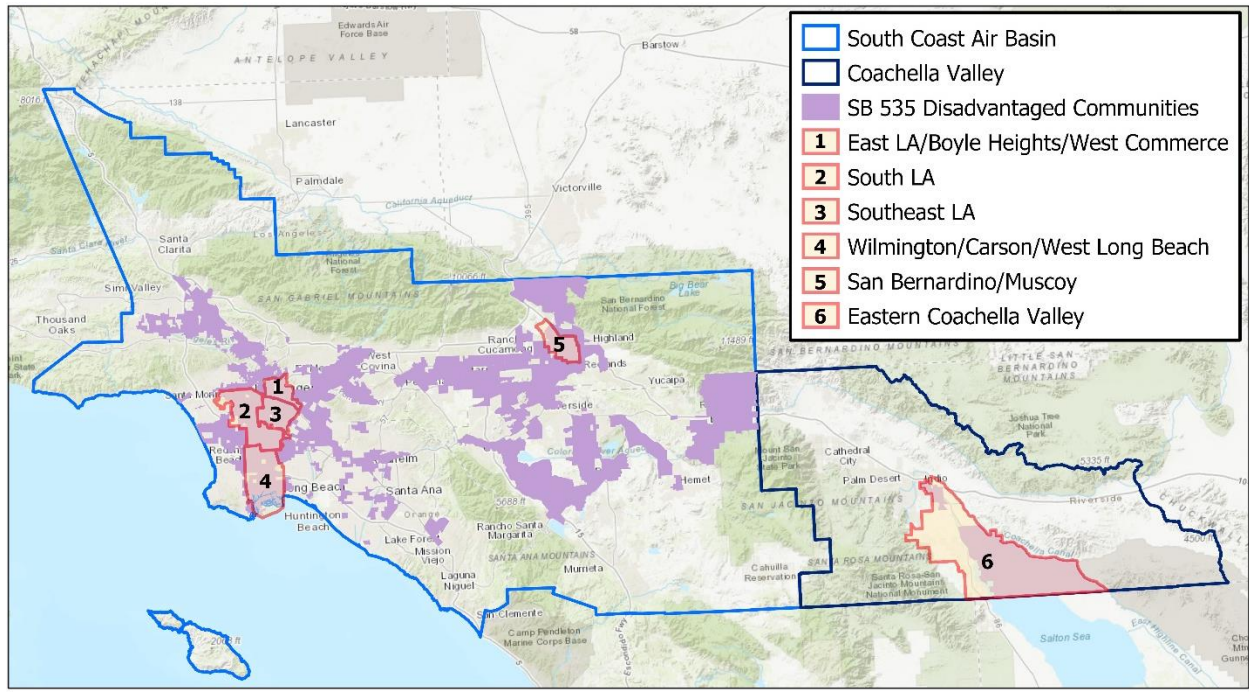


FIGURE 8-4
MAP OF CALENVROS SCREEN 4.0 TOP 25% TRACTS SB 535 DISADVANTAGED COMMUNITIES AND AB 617 COMMUNITIES WITHIN THE SOUTH COAST AIR BASIN AND COACHELLA VALLEY

Emissions in Environmental Justice Communities

As part of the AB 617 program, the South Coast AQMD has developed base and future milestone years emission inventories (EIs) of criteria air pollutants (CAPs) and toxic air contaminants (TACs) and provided source attribution reports for each community. The base year for each EI is one year prior to the year that a community was designated for the AB 617 program and future milestone years are five and ten years after expected adoption of the CERP. For more details on EI development and for AB 617 communities refer to the technical report.⁷

EIs are constantly under improvement to incorporate the latest information on emission sources and EIs are developed for each AB 617 community using the most up-to-date information at the time. For instance, EIs developed for the 2018-designated communities relied on data from the 2016 AQMP, whereas EIs developed for 2019-designated communities incorporated new updates that were consistent with revisions to the South Coast AQMD PM2.5 Plan for the 2006 PM2.5 standard. The EI developed for the 2020-designated community is consistent with the latest data used in the Draft Final 2022 AQMP.⁸

⁷ Source Attribution Methodology Report. Available at: <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/technical-advisory-group/source-attribution-methodology.pdf>.

⁸ Direct comparison of the EIs included in the CERPs for the various AB 617 communities may lead to distorted conclusions due to the different underlying data used in each EI and because baseline and future milestone years vary amongst communities.

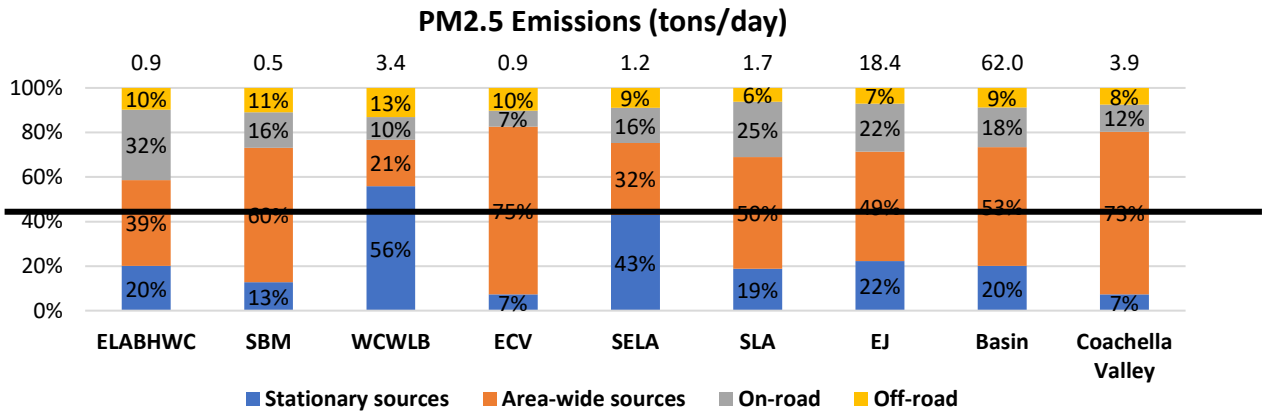
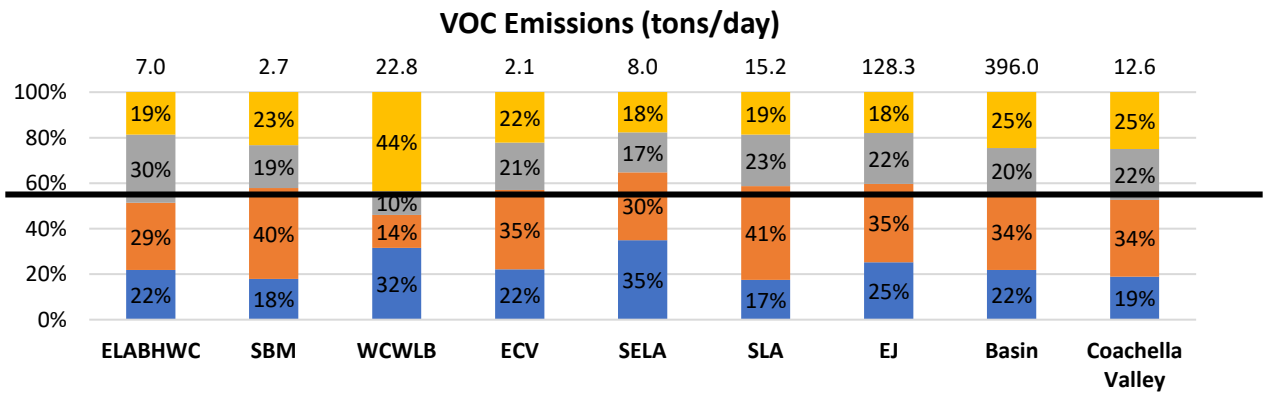
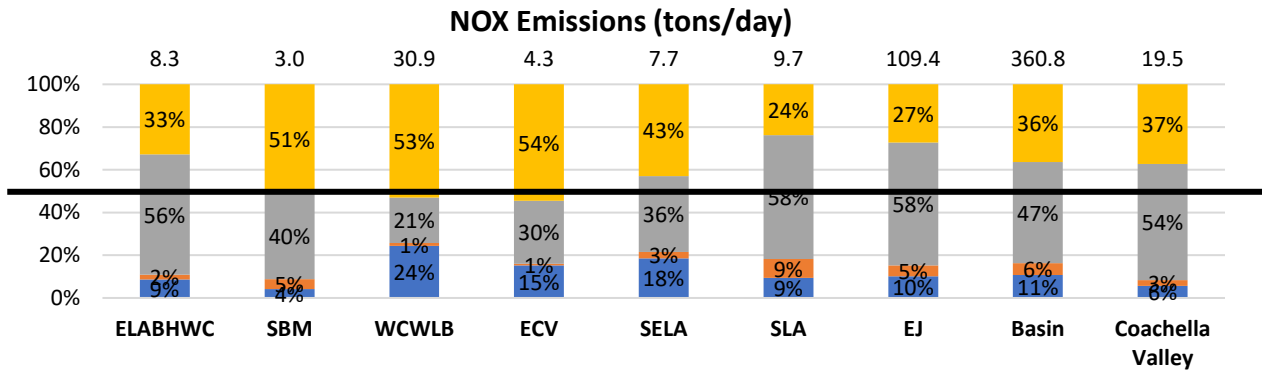
This section reevaluates the criteria pollutant emissions for all six AB 617 communities using the most recent data from the Draft Final 2022 AQMP for the base year 2018 and for the future year 2037.

Baseline 2018 Emissions

Figure 8-5 shows the NO_x, VOC (Volatile Organic Compounds) and PM_{2.5} emissions levels and contributions from stationary, areawide, on-road mobile, and off-road mobile sources in the six AB 617 and EJ communities for the base year 2018. ~~Note that emissions presented in this figure are annual average emissions.~~ Because each community varies widely in size and makeup of emission sources, total emissions also vary widely. The emissions shown in this section illustrates the relative contribution of different source categories in each community. The overwhelming majority of NO_x emissions in 2018 are from mobile sources throughout the Basin and Coachella Valley. In comparison with the basin average, the communities of ELABHWC and SLA have a higher contribution from on-road sources, and in particular, from heavy-duty trucks. This is because both those communities have multiple major freeways crossing their boundaries. Meanwhile, the communities of SBM, WCWLB, ECV and SELA show higher contribution from off-road sources due to large contributions from trains, and industrial and commercial off-road equipment and for WCWLB, ships. SELA and WCWLB include many industrial facilities, and WCWLB also includes large oil and gas, and petrochemical facilities, which leads to a higher contribution from stationary sources in these communities. Disadvantaged communities tend to concentrate along heavy-duty transport corridors, and as a result, the contribution from on-road NO_x in EJ communities is larger than the overall contribution in the Basin.

For 2018 VOC emissions, the largest contributor in the basin is area-wide sources, which are largely composed of emissions from consumer products such as hair sprays and cleaning products. Other significant sources include gasoline-powered on-road and off-road vehicles, and various industrial processing involving petroleum and solvent products. Most communities have a composition of VOC sources that is similar to the overall distribution in the basin. In WCWLB, there is a significant source of VOCs from ships and commercial harbor craft in the off-road category, and there are also large refineries that contribute a much larger percentage from stationary sources. In SELA there are also petrochemical industries that contribute to an overall higher percentage of VOC emissions from stationary sources compared to the overall breakdown in the Basin.

For 2018 PM_{2.5} emissions, the largest contributor in the basin is from area-wide sources. In particular, road dust and commercial cooking are the largest contributors. SLA has a similar distribution of sources as in the basin. In the communities of WCWLB and SELA, there are many industrial facilities, which leads to stationary sources contributing a large fraction of total PM_{2.5} emissions. The community of ELABHWC is crossed by major freeways, which results in a larger contribution from on-road sources. The community of SBM has slightly higher contribution from road dust than the overall basin average, whereas the community of ECV and the whole Coachella Valley have a significant source of PM_{2.5} from construction and demolition that contributes to a larger fraction of PM_{2.5} from area-wide sources.



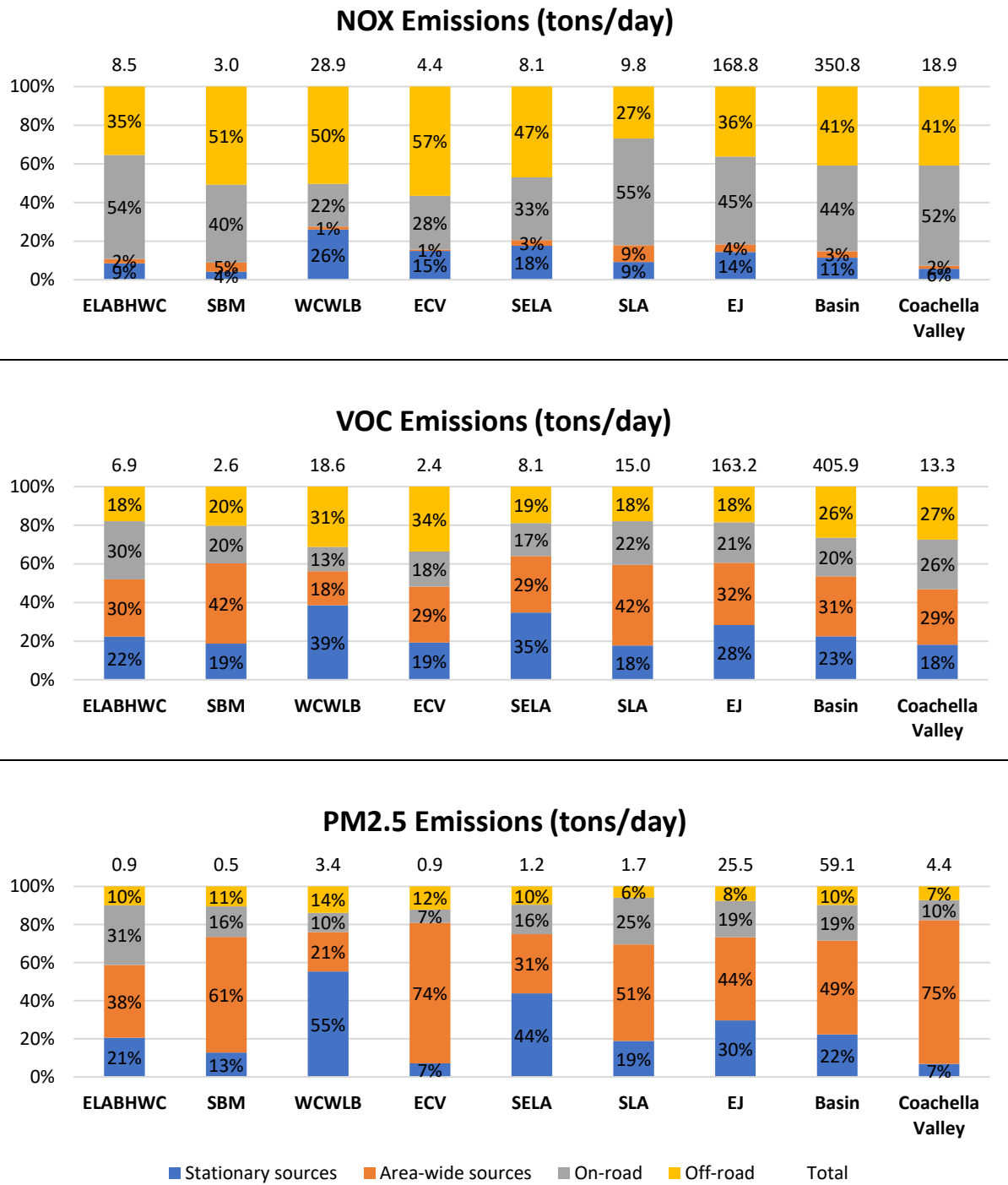


FIGURE 8-5
BASE YEAR 2018 EMISSION INVENTORIES FOR AB 617 PROGRAM COMMUNITIES AND ENVIRONMENTAL JUSTICE (EJ) COMMUNITIES
(ANNUAL AVERAGE IN TONS PER DAY SHOWN AT THE TOP OF EACH BAR. PERCENTAGE VALUES ARE ROUNDED TO THE NEAREST INTEGER AND MAY NOT ADD UP TO 100% DUE TO ROUNDING. ELABHWC - EAST LOS ANGELES/BOYLE HEIGHTS/WEST COMMERCE COMMUNITY; SBM - SAN BERNARDINO/MUSCOY COMMUNITY

(SBM); WCWLB - WILMINGTON/CARSON/WEST LONG BEACH COMMUNITY; ECV - THE EASTERN COACHELLA VALLEY COMMUNITY; SELA - SOUTHEAST LOS ANGELES COMMUNITY (SELA); AND SLA - SOUTH LOS ANGELES COMMUNITY)

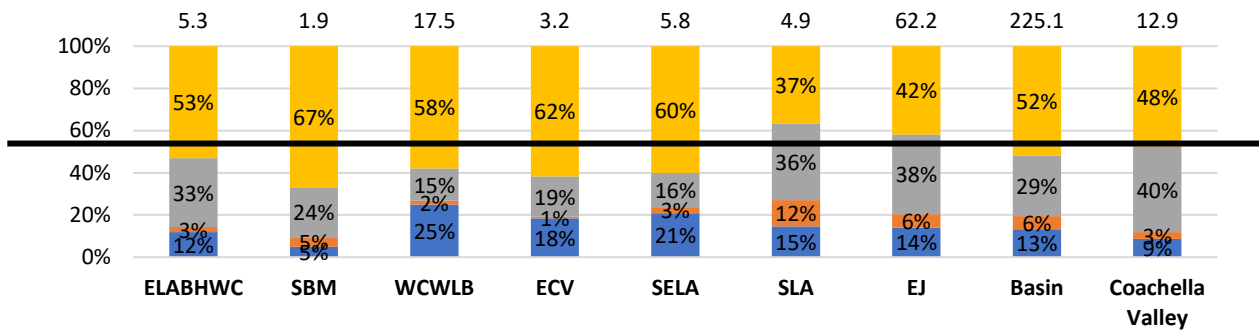
Future Emissions

Figure 8-6 shows the NO_x, VOC and PM_{2.5} emissions levels and relative contributions from stationary, areawide, and on- and off-road mobile sources in the six AB 617 communities and EJ areas for 2037. Significant NO_x emission reductions are projected for all areas due to the implementation of South Coast AQMD and CARB regulations and programs. Emissions from on-road sources are projected to be subject to the largest reductions. Also, emissions from stationary sources in the RECLAIM program are expected to decline. Emissions from off-road equipment are also expected to decline, except for trains. As a result, the overall contribution of on-road sources diminishes with respect to the other sources, and off-road sources become the major contributor to NO_x emissions in the future throughout the Basin and in many AB 617 communities. Communities with large contributions from trains and switchyards, like ELABHWC, SBM and SELA are projected to experience the largest increases in contributions from off-road sources.

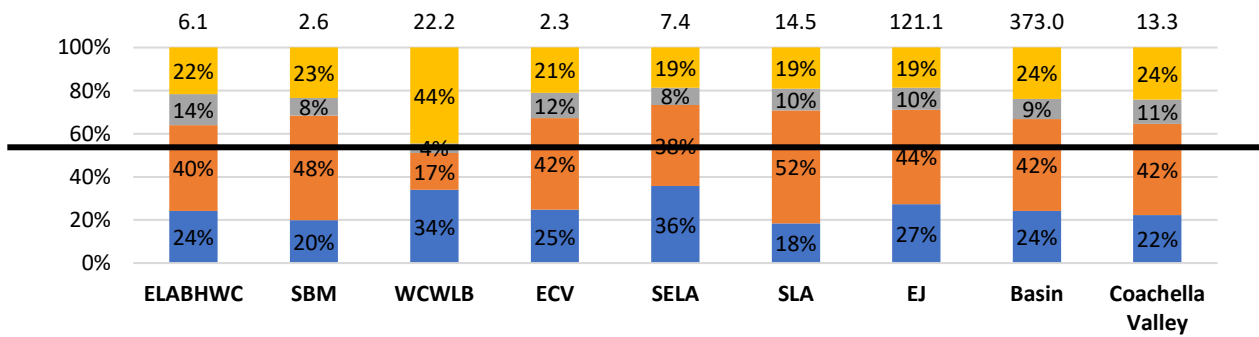
VOC emissions are projected to decrease throughout the South Coast Air Basin to a significantly lesser extent than NO_x emissions. This is because consumer products, which are the largest contributor to VOC emissions, are not currently largely regulated, and VOC emissions from areawide sources increase due to growth in population and industrial activity. As a result, the contribution of areawide sources increases with respect to the other sources. On the other hand, vehicle regulations and turnover to cleaner vehicles will drive the decrease in the contribution from on-road sources.

Future PM_{2.5} emissions in the Basin and most AB 617 communities are projected to see little change in the future. Sources like commercial cooking and road dust are expected to increase over time as the population grows, whereas emissions from mobile sources are projected to decline slightly due to cleaner vehicles. In the case of the Coachella Valley and the ECV AB 617 community, projections indicate an increase in the PM_{2.5} emissions from construction and demolition, which will increase the contribution of areawide sources to overall PM_{2.5} emissions in that region. The 2022 AQMP includes control measures aiming to reduce NO_x from various emission sources. As NO_x is a significant precursor of PM_{2.5}, NO_x reductions are expected to result in a decrease in PM_{2.5} levels in the region.

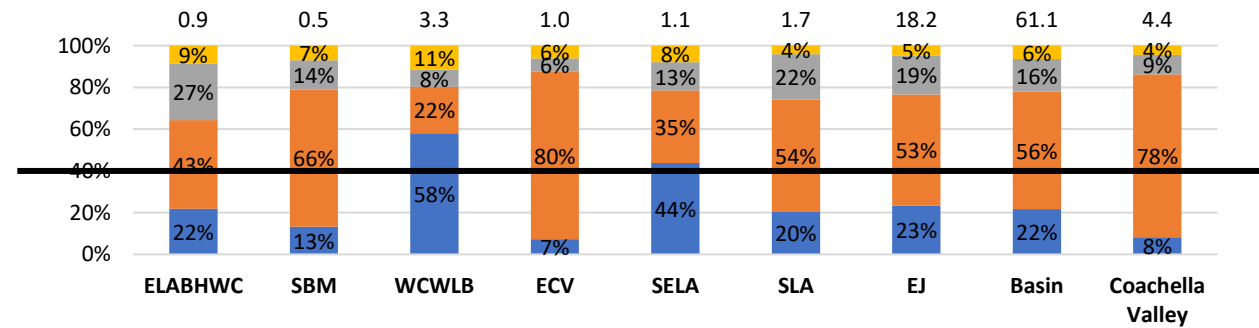
NOX Emissions (tons/day)



VOC Emissions (tons/day)



PM2.5 Emissions (tons/day)



■ Stationary sources ■ Area-wide sources ■ On-road ■ Off-road

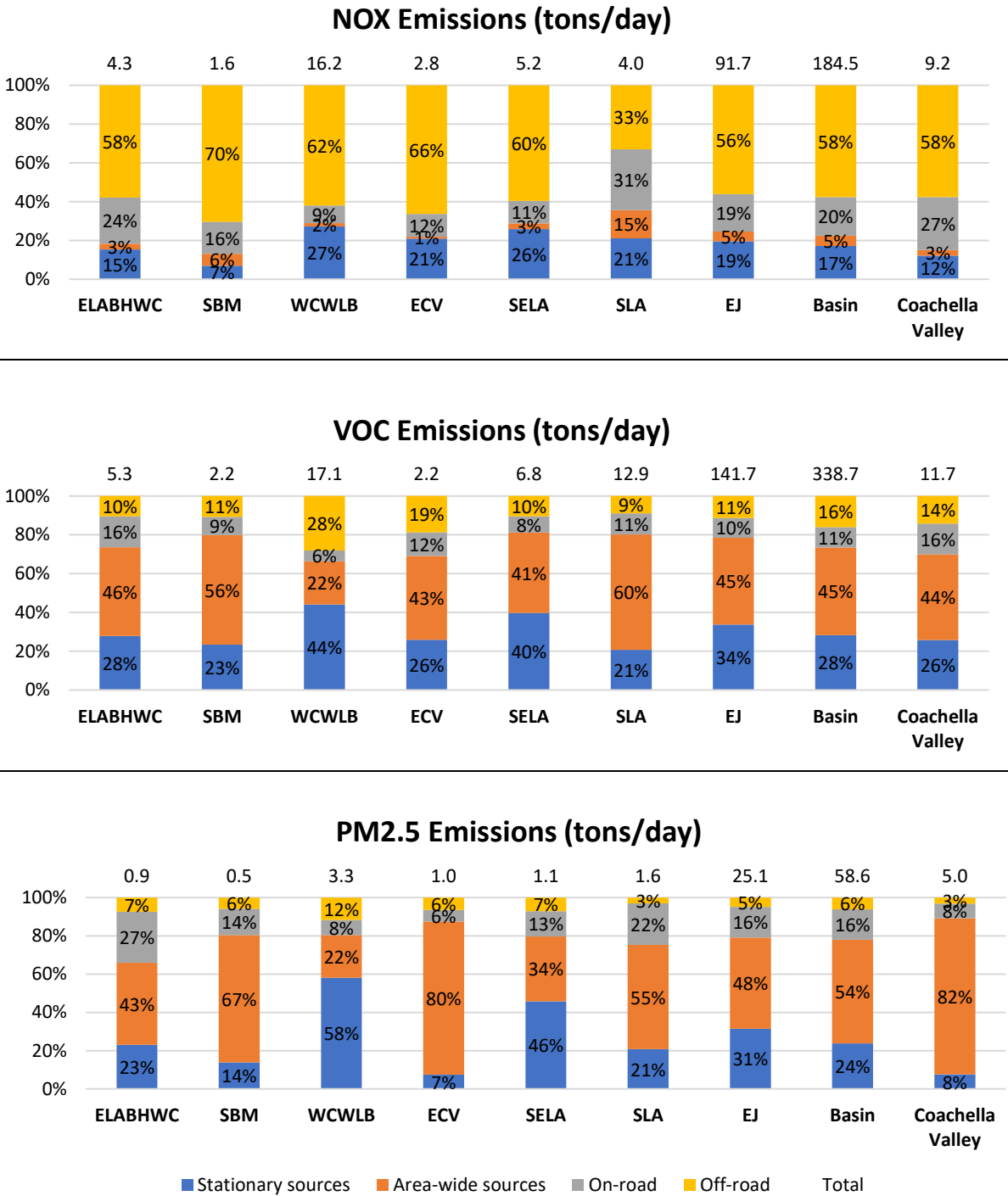


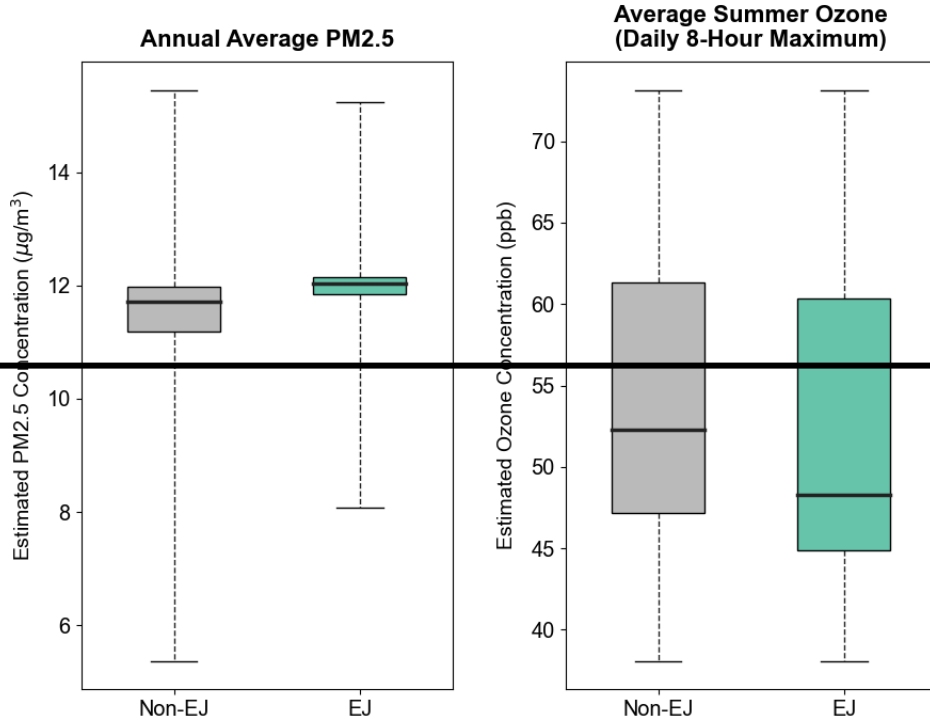
FIGURE 8-6
BASELINE 2037 EMISSION INVENTORIES FOR AB 617 PROGRAM COMMUNITIES AND ENVIRONMENTAL JUSTICE (EJ) COMMUNITIES
 (ANNUAL AVERAGE IN TONS PER DAY SHOWN AT THE TOP OF EACH BAR. PERCENTAGE VALUES ARE ROUNDED TO THE NEAREST INTEGER AND MAY NOT ADD UP TO 100% DUE TO ROUNDING. ELABHWC - EAST LOS ANGELES/BOYLE HEIGHTS/WEST COMMERCE COMMUNITY; SBM - SAN BERNARDINO/MUSCOY COMMUNITY)

(SBM); WCWLB - WILMINGTON/CARSON/WEST LONG BEACH COMMUNITY; ECV - THE EASTERN COACHELLA VALLEY COMMUNITY; SELA - SOUTHEAST LOS ANGELES COMMUNITY (SELA); AND SLA - SOUTH LOS ANGELES COMMUNITY)

Air Quality in Environmental Justice Communities

The impacts of air pollution are not distributed equitably throughout the South Coast AQMD jurisdiction, with some communities bearing much higher air pollution burdens. In this section, results from the recently released CalEnviroScreen 4.0 are used to show the distribution of air pollution across the South Coast Air Basin and Coachella Valley. Ambient ozone and PM_{2.5} concentrations make up two of the 13 pollution burden indicators included in CalEnviroScreen 4.0. Figures 8-7 and 8-8 show the distribution of estimated ozone and PM_{2.5} concentrations in EJ and non-EJ communities in the South Coast Air Basin and Coachella Valley. As described in the CalEnviroScreen 4.0 report, average annual PM_{2.5} concentrations in each census tract were calculated using 2015-2017 ambient air monitoring data combined with satellite observations. While estimated annual average PM_{2.5} concentrations span a wide range of concentrations in EJ and non-EJ communities, PM_{2.5} concentrations are generally higher in EJ communities in the South Coast Air Basin. Overall PM_{2.5} concentrations are lower in the Coachella Valley, but concentrations are also higher in EJ communities compared to other areas within the Coachella Valley. The observed disparities in both air basins are likely driven by local sources of directly emitted PM_{2.5} such as freeways and industrial facilities, that tend to be concentrated in disadvantaged communities. These sources also contribute to higher levels of diesel particulate matter, a powerful air toxic, in EJ communities.

Average daily maximum 8-hour ozone concentrations from May to October (i.e., peak ozone season) were estimated using 2017-2019 ambient air monitoring data. As shown in Figures 8-7 and 8-8, ozone concentration distributions are broadly similar between EJ and non-EJ communities in both the South Coast Air Basin and Coachella Valley. Since ozone is a secondary pollutant that forms downwind of precursor emission sources, local variability in ozone concentration is more muted compared to directly emitted pollutants. The lower median summer ozone concentration in EJ communities in the Basin is driven by the geographic distribution of EJ communities. In the Basin, the highest ozone concentrations are observed in the Inland Empire as sea breezes push NO_x and VOC emissions inland from major urban source areas. Since EJ communities are highly concentrated in Los Angeles County, the lower median reflects generally lower ozone concentrations in areas closer to the coast.



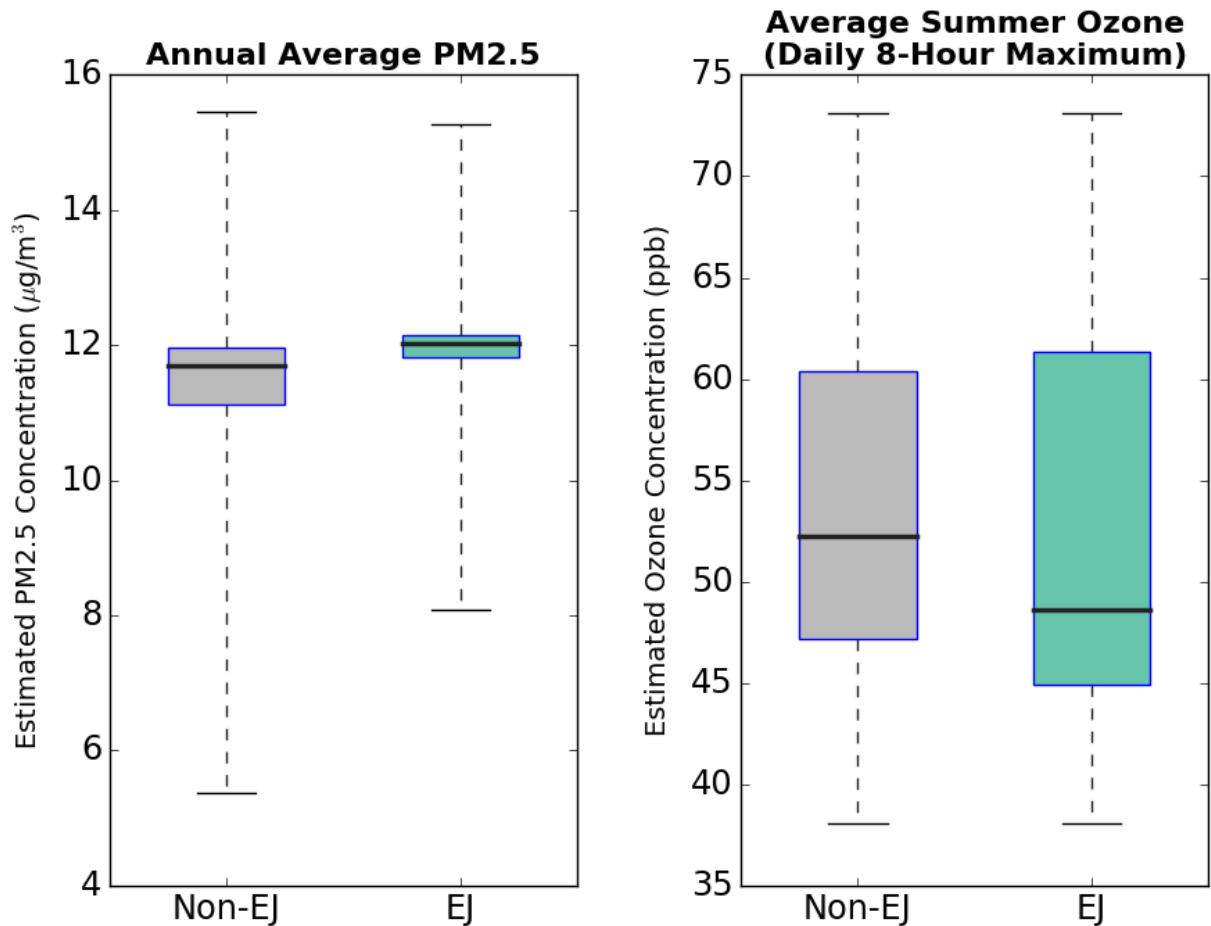
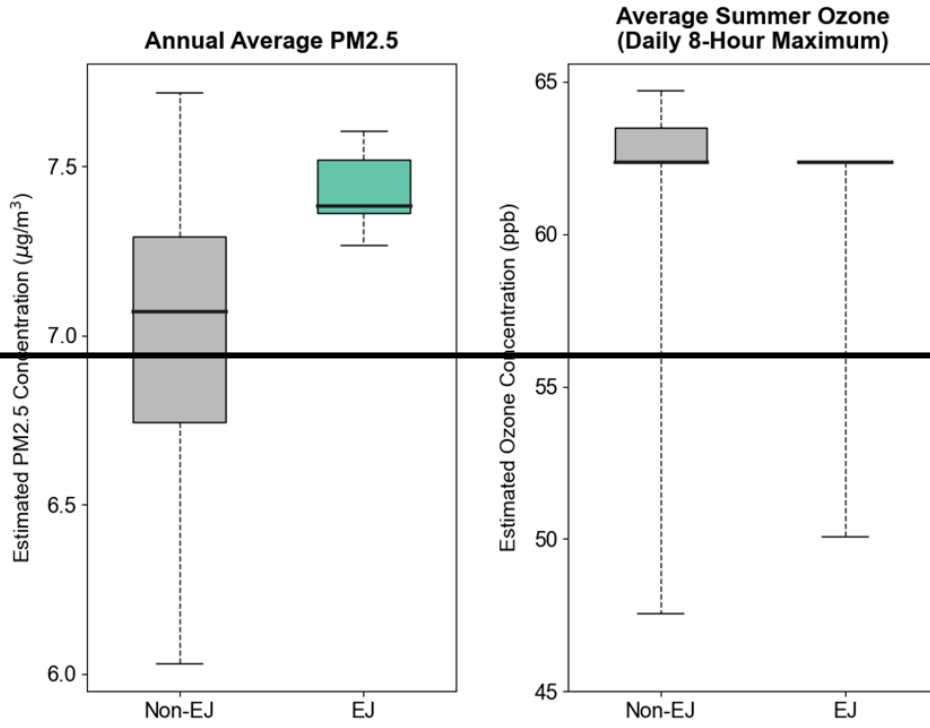


FIGURE 8-7

ESTIMATED ANNUAL AVERAGE PM2.5 AND AVERAGE SUMMER (MAY-OCTOBER) DAILY 8-HOUR MAXIMUM CONCENTRATIONS IN EJ AND NON-EJ COMMUNITIES IN THE SOUTH COAST AIR BASIN
(BASIN CENSUS TRACTS WERE DIVIDED INTO NON-EJ AND EJ GROUPS BASED ON CALENVIROSCREEN 4.0 SCORES, WITH EJ COMMUNITIES DEFINED AS TRACTS WITH SCORES IN THE TOP 25% STATEWIDE AND NON-EJ COMMUNITIES AS TRACTS WITH SCORES IN THE BOTTOM 75%. THE DEFINITION OF DISADVANTAGED COMMUNITIES UNDER SB 535. BOXES INDICATE THE INTERQUARTILE RANGE (25TH TO 75TH PERCENTILE CONCENTRATIONS) AND BOLD LINE INDICATES THE MEDIAN CONCENTRATION (50TH PERCENTILE). DASHED WHISKERS INDICATE THE FULL RANGE OF ESTIMATED CONCENTRATIONS FOR ALL TRACTS IN EACH GROUP. PM2.5 AND OZONE CONCENTRATION DATA WERE RETRIEVED FROM CALENVIROSCREEN 4.0. FULL DETAILS ON DATA AND CALCULATIONS CAN BE FOUND IN THE CALENVIROSCREEN 4.0 REPORT.)



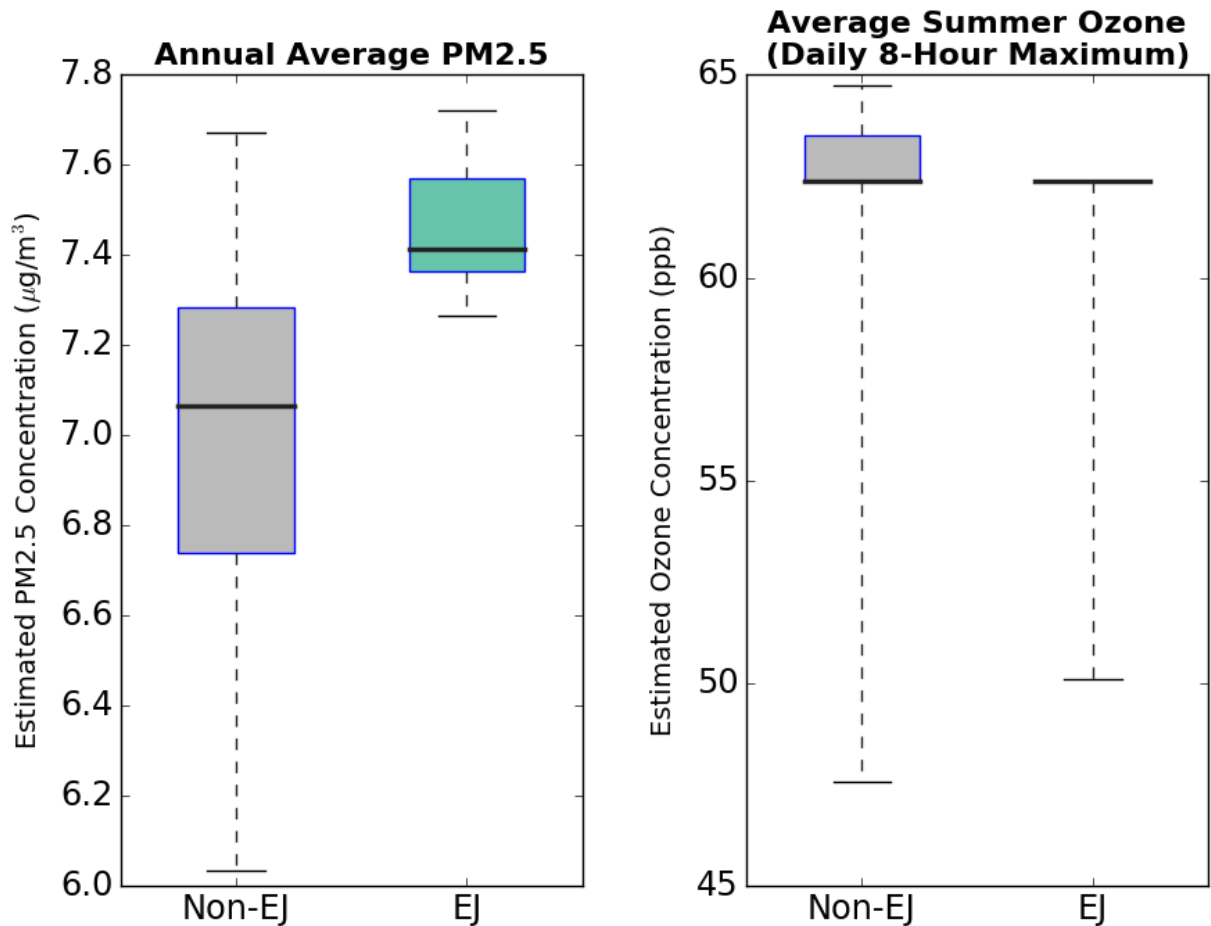


FIGURE 8-8

ESTIMATED ANNUAL AVERAGE PM2.5 AND AVERAGE SUMMER (MAY-OCTOBER) DAILY 8-HOUR MAXIMUM CONCENTRATIONS IN EJ AND NON-EJ COMMUNITIES IN THE COACHELLA VALLEY
 (SAME AS ABOVE FIGURE FOR COACHELLA VALLEY CENSUS TRACTS. COACHELLA VALLEY IS DEFINED HERE AS THE PORTION OF THE SALTON SEA AIR BASIN WITHIN THE SOUTH COAST AQMD JURISDICTION.)

Figure 8-9 shows estimated annual average PM2.5 concentrations and average summer ozone concentrations in the six communities in the South Coast AQMD jurisdiction that have been designated as AB 617 communities as of early 2022. It is important to note that PM2.5 and ozone represent only two of the many air pollution challenges that these communities face. All six communities contain census tracts that rank in the CalEnviroScreen 4.0 top 25 percent most impacted tracts across California. Estimated PM2.5 concentrations for the five communities in the Basin are near or above the median concentration of all Basin tracts. The estimated annual PM2.5 concentration in the Eastern Coachella Valley (ECV) community is also elevated compared to the median concentration in the Coachella Valley. Summer ozone concentrations in the four Los Angeles County AB 617 communities are near or below the Basin median, while the summer ozone concentration in the San Bernardino/Muscoy community is significantly higher than the Basin median. This pattern again reflects the high ozone concentrations in inland areas driven by transport of the pollutants that form ozone from the Los Angeles area. The estimated summer ozone concentration in ECV is similar to the median Coachella Valley concentration.

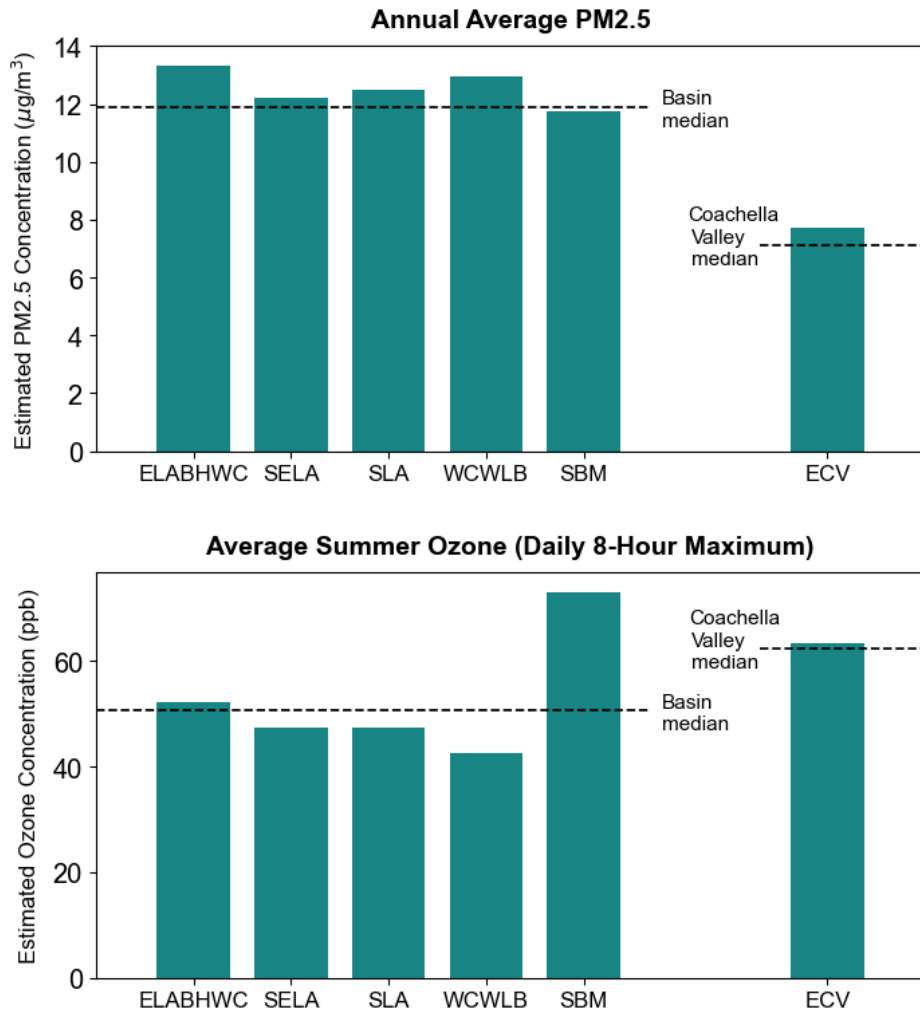


FIGURE 8-9
ESTIMATED ANNUAL AVERAGE PM2.5 AND AVERAGE SUMMER (MAY-OCTOBER) DAILY 8-HOUR MAXIMUM CONCENTRATIONS IN SOUTH COAST AQMD AB 617 COMMUNITIES
 (COMMUNITIES INCLUDE EAST LOS ANGELES/BOYLE HEIGHTS/WEST COMMERCE (ELABHWC), SOUTHEAST LOS ANGELES (SELA), SOUTH LOS ANGELES (SLA), WILMINGTON/CARSON/WEST LONG BEACH (WCWLB), SAN BERNARDINO/MUSCOY (SBM), AND EASTERN COACHELLA VALLEY (ECV). BARS REPRESENT THE MAXIMUM CONCENTRATION OF ALL CENSUS TRACTS WITHIN COMMUNITY BOUNDARIES FROM CALENVIROSCREEN 4.0 DATA. DASHED LINES INDICATE MEDIAN CONCENTRATIONS FOR ALL TRACTS IN THE SOUTH COAST AIR BASIN AND COACHELLA VALLEY.)

Exposure to air toxics is also an important driver of health risks in AB 617 communities. The Multiple Air Toxics Exposure Study V (MATES V)⁹ found a substantial decrease in estimated cancer risk in each of the AB 617 communities from 2012 to 2018.¹⁰ Since there are generally more sources of air toxics in or near EJ communities, such as in the AB 617 communities, the cancer risks in these communities are higher than the basin average. The ECV community cancer risk is higher than the average risk due to air pollution for the entire Coachella Valley. All the other AB 617 communities are in the South Coast Air Basin and have higher cancer risks than the average for the South Coast Air Basin. In general, the highest concentrations of cancer-causing pollutants, such as diesel particulates, are found near the source of these pollutants.

8-Hour Ozone Attainment in AB 617 and Environmental Justice Communities

Air quality simulations to demonstrate future attainment of the ozone standard are an integral part of the planning process to achieve clean air. These simulations estimate the impact of reduced emissions on ozone levels. Table 8-1 summarizes the results of the ozone simulations in each of the South Coast AQMD's AB 617 communities. Because regulatory ozone monitors are not located in all communities, this analysis employed the unmonitored area analysis described in Appendix V. The future ozone design values correspond to the maximum value predicted within each community. In this analysis, the "Community Boundaries" were used, and attainment of the 2015 8-hour ozone standard was demonstrated in all AB 617 communities.

Table 8-2 summarizes the results of the ozone simulations in environmental justice communities, ~~defined as CalEnviroScreen 4.0 census tracts greater than or equal to the 75th percentile (the top 25 percent), which correspond to the disadvantaged communities as defined by SB 535.~~ The future ozone design values correspond to the maximum predicted value across all census tracts within the South Coast AQMD's jurisdiction. Attainment of the 2015 8-hour ozone standard was demonstrated in all environmental justice communities.

⁹ <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v>.

¹⁰ <http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf?sfvrsn=6>.

TABLE 8-1

MODEL-PREDICTED 8-HOUR OZONE DESIGN VALUES (PPB) IN THE SOUTH COAST AQMD'S AB 617 COMMUNITIES

Community	2037 Baseline	2037 Controlled
Wilmington/West Long Beach/Carson	64.2 <u>62.4</u>	56.0 <u>57.7</u>
San Bernardino/Muscoy	99.2 <u>95.5</u>	65.9 <u>68.6</u>
East LA/Boyle Heights/West Commerce	78.2 <u>74.6</u>	65.6 <u>64.0</u>
Eastern Coachella Valley	78.7 <u>76.2</u>	66.5 <u>68.6</u>
South Los Angeles	70.4 <u>69.6</u>	61.9 <u>62.6</u>
Southeast Los Angeles	71.6 <u>69.1</u>	61.5 <u>62.0</u>

TABLE 8-2

MODEL-PREDICTED 8-HOUR OZONE DESIGN VALUES (PPB) IN ENVIRONMENTAL JUSTICE COMMUNITIES

Community	2037 Baseline	2037 Controlled
All Environmental Justice	99.2 <u>97.4</u>	69.9 <u>8</u>

Environmental Justice Advisory Group

The South Coast AQMD Governing Board established an Ethnic Community Advisory Council on September 7, 1990, to serve as an advisory body to the Governing Board with specialized expertise on the impact of air quality issues on the ethnic communities in the South Coast Air Basin. ECAC contributed to building a strong foundation for the South Coast AQMD's environmental justice efforts through internal and external initiatives. Some notable accomplishments include the School Site Selection Guidance, publication of emissions data online, community "Smoke School" trainings and Air Quality Institutes, webcasting Governing Board meetings, and other enhancements to increase transparency and accessibility to the community.

In 2008, the Administrative Committee recommended that this group be restructured into an Environmental Justice Advisory Group (EJAG), with a focus on air quality and environmental justice issues in the area served by the South Coast AQMD. The mission of EJAG is to advise and assist the South Coast

AQMD in protecting and improving public health in the South Coast AQMD's most impacted communities through the reduction and prevention of air pollution. The goals of the EJAG are to:

- Advise the South Coast AQMD on issues related to environmental justice;
- Create and sustain a positive and productive relationship between the South Coast AQMD and community members;
- Better inform the South Coast AQMD about environmental justice issues; and
- Assure that the South Coast AQMD makes meaningful and continuous progress toward the achievement of environmental justice through its decisions and activities.

On May 1, 2009 the South Coast Governing Board amended the EJAG charter to increase membership from 20 members to 30 members. EJAG includes an ethnically and geographically diverse membership, with at least two members from each county and representatives from the most highly impacted communities within the South Coast AQMD's jurisdiction. EJAG meetings are held bi-monthly to quarterly.

Incentives and Funding in Environmental Justice Communities

Incentives and funding will continue to be a critical component in implementing the control strategies in the 2022 AQMP. Given the needed transformation to zero emission technologies across all emission sources, regulations alone will not be sufficient to achieve the magnitude of emission reduction needed. Significant public and private investments and continued innovation and technology advancement will be required to accelerate the deployment of advanced zero emission and cleaner technologies and associated fueling infrastructure.

Incentive funding can be used to subsidize low-emitting or zero emission equipment purchases and help promote deployment of clean technologies for both stationary and mobile sources. For mobile sources, incentive funds can facilitate the replacement of older, high-emitting vehicles and equipment with the cleanest vehicles and equipment commercially available. The South Coast AQMD has been implementing a number of incentive programs to accelerate the deployment of clean technologies with a particular emphasis on benefits to EJ communities. For example, under the Lower-Emission School Bus Program, the Carl Moyer Program and other diesel mitigation programs, not less than 50 percent of the funds appropriated are expended in a manner that directly reduces air contaminants and/or associated public health risks in disadvantaged and low-income communities. In implementing existing incentive programs and for the development of future programs, the South Coast AQMD will continue to prioritize incentive funding in EJ areas and seek opportunities to expand funding to benefit the most disadvantaged communities.

For stationary sources, incentives can help promote the transformation to zero emission technologies for small commercial and residential combustion sources such as water heaters and furnaces. Incentive programs will be of particular importance for measures regarding zero emission buildings electrification. Programs to change out gas appliances, heaters and boilers may be cost-effective, but not necessarily affordable. First, there is the cost of replacing the appliances themselves – which would not be insignificant for many smaller businesses or residential households. Second, many buildings will likely

need additional electrical panel upgrades and other infrastructure to support the increased electrical load needed to power the replacement appliances. These infrastructure upgrades can be far more costly than the cost of replacing gas appliances. These issues are further magnified in economically disadvantaged communities, where switching from gas to electrical appliances may be cost-prohibitive unless a substantial portion of those costs are covered by other programs.

Existing rebate programs, such as the South Coast AQMD's Clear Air Furnace program, funded by Rule 1111 mitigation fees, provides rebates to those installing a residential electric heat pump to replace a natural gas furnace. In addition, a specific percentage of the funding was dedicated to those applying from a disadvantaged community. This program can be further funded to enhance the existing rebate program or expanded to include other building appliances such as water heaters. In addition, partnerships with other organizations, such as Technology and Equipment for Clean Heating (TECH) Clean California or Southern California Edison, with similar programs and directives could assist in providing more rebate money to further incentivize early deployment of cleaner technologies. Therefore, evaluating funding needs and sourcing funding to support control measures associated with zero emission building electrification measures will be critical. But a much larger issue will be structuring incentive/rebate programs in a way that is equitable and does not leave economically disadvantaged communities behind. Stationary source control measures for the R-CMB series, C-CMB series, and ECC-03 target emission reductions from residential and commercial buildings and include incentive components as part of the proposed control approach. Among control measures R-CMB-01, R-CMB-02, R-CMB-04, C-CMB-01 and C-CMB-02, a mitigation fee will be considered where appropriate. The mitigation fee collected would be utilized as incentives to accelerate the adoption of zero emission units or utilized to assist in panel upgrades or infrastructure at residences in disadvantaged communities. In developing these incentive programs, the South Coast AQMD will seek community input and also evaluate ways to prioritize distribution of funding to benefit the most disadvantaged communities. The South Coast AQMD will ensure that environmental justice areas are able to access advanced technologies and also benefit from the transition to zero emission technologies.