State of California
Air Resources Board

Assembly Bill 617 Community Air Protection Program – Selection of Communities

Resolution 21-6

February 25, 2021

Agenda Item No.: 21-1-8

Whereas, California's air quality programs have led to significant public health improvements; however, certain communities continue to experience environmental and health inequities from air pollution;

Whereas, many of these communities are affected by multiple stationary, area, and mobile sources of air pollution and suffer disproportionate health impacts;

Whereas, the high cumulative exposure burdens in these communities are a public health concern, contributing to health conditions, such as cardiorespiratory disease, increased cancer risk, and an increased risk of premature death;

Whereas, expedited emission reductions of toxic air contaminants and criteria air pollutants in communities with high cumulative exposure burdens are critical to reduce these disproportionate health impacts;

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, the Legislature enacted the California Clean Air Act of 1988 (Stats. 1988, ch. 1568) declaring that it is necessary that the State ambient air quality standards be attained by the earliest practicable date to protect public health, particularly the health of children, older people, and those with respiratory diseases;

Whereas, section 39650, et seq., of the Health and Safety Code establishes the policy of the State to control emissions of toxic air contaminants, based on the best available scientific information, and directs the Board to establish airborne toxic control measures (ATCM);

Whereas, Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes 2017) added sections 39607.1, 40920.8, 42411, 42705.5, 44391.2 and amended sections 40920.6, 42400, 42402 in the Health and Safety Code, requiring a new community-focused program to address criteria air pollutants and toxic air contaminants;

Whereas, AB 617 is a significant step in transforming California's air quality programs to address air pollution disparities at the neighborhood level and includes the following requirements;

Whereas, AB 617 requires CARB to annually consider the selection of communities with high cumulative exposure burdens of criteria air pollutants and toxic air contaminants for the deployment of community air monitoring and/or the development of community emissions reduction programs;

Whereas, AB 617 requires an air district containing a community selected for deployment of a community air monitoring system to begin deployment of monitoring in the community within one year of the community being selected by CARB;

Whereas, AB 617 requires an air district containing a community selected for development of a community emissions reduction program to adopt, in consultation with CARB, individuals, community-based organizations, affected sources, and local governmental bodies, a community emission reduction program for the community within one year of selection by CARB;

Whereas, in 2018, utilizing available data, staff conducted a statewide assessment of the cumulative exposure burden in communities throughout the State, to help identify communities for selection;

Whereas, on September 27, 2018, CARB approved the *Community Air Protection Blueprint: For Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring (*Blueprint), which set overall Program requirements to reduce toxic air contaminant and criteria air pollutant emissions in communities with high cumulative exposure, and select communities with high cumulative exposure burdens for the deployment of community air monitoring systems and/or the development of community emissions reduction programs;

Whereas, as a result of CARB selecting communities in 2018 and 2019, currently there are thirteen communities implementing or developing community air monitoring and/or community emissions reduction programs throughout California;

Whereas, the Board directed staff in the September 2018 board meeting in which it selected the first year communities to consider the following in developing recommendations for communities in subsequent years:

- Prioritize moving those communities that were previously selected only for air monitoring into development of an emissions reduction program, if the recommendation is supported by data and by the community steering committee/district;

- Draw from those communities that were priority recommendations from air districts and community-based organizations prior years, but were not selected.

Whereas, the work of the air districts and community steering committees in the thirteen selected communities are setting the foundation for successful long-term Program implementation to achieve AB 617's goals to deliver measurable reductions in emissions and exposure;

Whereas, significant resources are needed to support CARB and air district staff work and to ensure community steering committees have the needed resources to effectively participate during the ongoing work to implement the Program;

Whereas, for those air districts that had communities selected in previous years for the development of community air monitoring only, it is important for those communities to transition to develop a community emissions reduction program, as early as practical, to support development of a plan to reduce emissions in the communities based on data gathered through monitoring prior to selection of additional communities in that air district;

Whereas, the State budget maintains the same level of funding in Fiscal Year 2020/2021 for program implementation and incentives funds are uncertain, and thus, adding new communities will require careful balancing of resources to avoid adverse impacts to the Program's foundation being constructed by air districts and community steering committees within the existing thirteen communities and in the new communities;

Whereas, the community steering committees should be provided all available resources and all feasible tools necessary to develop and implement successful community air monitoring systems and emissions reduction programs;

Whereas, CARB staff held virtual community meetings in June and November 2020 to receive public input on the process for selecting new communities and discuss staff's proposed community recommendations, which are the same as staff's final recommendations to the Board;

Whereas, CARB staff released for public comment on November 20, 2020, the *"2020 Community Recommendations Staff Report,"* (Staff Report) (Attachment A) containing recommended communities for Board consideration, with preliminary boundaries for each community;

Whereas, in consideration of the issues described above, CARB staff are recommending the communities described in Attachment A and listed in Attachment B to the Board for selection for deployment of community air monitoring and/or the development of community emissions reduction programs;

Whereas, the Staff Report included a preliminary inventory for the recommended communities;

Whereas, in consideration of the Staff Report, written and oral testimony presented by community members, the air districts, industry, and other stakeholders, the Board finds that:

- Many communities throughout the State experience disproportionate cumulative environmental and health impacts from air pollution compared to other communities in the State;

- Community emissions reduction programs and community air monitoring systems are necessary tools to reduce pollution exposures and help address these exposure inequities;

- Continued resources are needed in the 13 communities selected to effectively implement the ongoing work that has begun and deliver measurable reductions in emissions and exposure as intended by AB 617;

- The current State budget for program implementation and incentive funds means there must be a careful balancing of resources when adding communities to the program; the consideration of these communities is for immediate deployment of community air monitoring and/or development of community emissions reduction programs.

- The Staff Report recommends additional communities with high exposure burdens for toxic air contaminants and criteria air pollutants to deploy community air monitoring systems and/or community emissions reduction programs, based on nominations received by CARB and the Board's prior direction to staff for future recommendations, and is consistent with the requirements of AB 617;

Whereas, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60008); and

Whereas, staff has determined that the proposed Staff Report is exempt from CEQA

under California Code of Regulations, title 14, section 15061(b)(3) ("common sense" exemption) because the record evidence shows with certainty that there is no possibility that the proposed activity may result in a significant adverse impact on the environment, as described in Appendix B of the Staff Report.

Now, therefore, be it resolved that the Board selects the communities listed in Attachment B for the deployment of air monitoring systems and/or development of community emissions reduction programs, as noted in Attachment B, Table 1.

Be it further resolved that the Board finds that the proposed community recommendations are exempt from CEQA under California Code of Regulations, title 14, section 15061(b)(3) because substantial evidence in the record shows with certainty that there is no possibility that the proposal may result in a significant adverse impact on the environment.

Be it further resolved that an air district containing a community selected for development of community emissions reduction program must adopt an emissions reduction program that follows the requirements set forth in the Blueprint, for the community, within one year after the Board's selection of the community.

Be it further resolved that the air districts must proceed quickly to convene community steering committees and work with the community to determine final community boundaries.

Be it further resolved that, within three months of CARB selection of the community, the air districts must, in collaboration with the community steering committee, work to establish a charter to clearly set out the committee structure and process.

Be it further resolved that the Board directs CARB staff to, within three months after selection of the community, and as needed throughout the development process of the community air monitoring systems and emissions reduction programs, present to the community steering committee the goals and requirements set forth in the Blueprint.

Be it further resolved that the Board directs CARB staff to work with communities and air districts to finalize baseline and forcasted community emissions inventories as soon as possible and present the updated inventories to the community steering committees for use in developing and/or implementing all community air monitoring systems and/or emissions reduction programs.

Be it further resolved that the Board directs CARB staff to continue outreach activities and consult with community members, environmental justice organizations, air districts, affected industry, and other stakeholders to implement the Program and provide periodic updates to the Board.

I hereby certify that the above is a true and correct copy of Resolution 21-6 as adopted by the California Air Resources Board.

Ryan Sakazaki

Ryan Sakazaki, Board Clerk

Resolution 21-6

February 25, 2021

Identification of Attachments to the Board Resolution

Attachment A: 2020 Community Recommendations Staff Report
Attachment B: List of Staff Community Recommendations.

Community Air Protection Program

2020 Community Recommendations Staff Report

November 20, 2020

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I. Introduction

In response to Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes 2017) the California Air Resources Board (CARB) established the Community Air Protection Program (Program). The Program's focus is to reduce exposure in communities most impacted by air pollution. California's air quality programs are responsible for significant public health improvements statewide and regional air quality planning requirements, advancement of technology-based solutions, and risk reduction efforts near industrial facilities. However, certain communities continue to experience environmental and health inequities from air pollution. Communities near ports, rail yards, warehouses, and freeways, for example, experience a higher concentration of air pollution than other areas due to emissions from mobile sources such as cars, trucks, locomotives, and ships. Many of the same communities also experience pollution impacts from stationary facilities such as oil refineries, chrome platers, metal recycling facilities, oil and gas operations, as well as agricultural burning, and fugitive dust. In addition to environmental disparities, residents in these communities suffer from a variety of other issues that include disparities in health and socio-economic indicators, and impacts from poor land use decisions.

Staff have worked with community members, air districts, community based organizations, and other stakeholders to develop this 2020 recommendation of new communities in the Community Air Protection Program. Based on criteria set forth in AB 617 and the Blueprint, public feedback staff are recommending:

- The Richmond-San Pablo Community in the Bay Area Air Quality Management District (BAAQMD) selected for community air monitoring plan in 2018, transition to develop and implement a community emissions reduction program.

- The Arvin, Lamont Community in the San Joaquin Valley Air Pollution Control District (SJVAPCD) be selected to develop both a community air monitoring and emissions reduction programs.

- The South Los Angeles community in the South Coast Air Quality Management District (SCAQMD) be selected to develop both a community air monitoring and emissions reduction programs.

Background

AB 617 requires CARB to annually consider selection of communities for development and implementation of community air monitoring plans and/or community emissions reduction programs in communities affected by a high cumulative exposure burden. Thirteen communities are currently selected for participation in the program. In September 2018, CARB Governing Board (CARB Board) adopted the Community Air Protection Blueprint that established the Program elements to accomplish AB 617 requirements and selected the first ten communities for development of a community emissions reduction program, monitoring plan, or both. [1] In addition, in December of 2019, the CARB Board selected three new communities for the development of community emissions reduction programs and monitoring plans. In addition, one of the communities selected for monitoring in 2018 was selected to develop a community emissions reduction program in 2019.

This staff report outlines CARB staff's recommendation for 2020 community selection based on a number of factors and building upon the prior considerations used in the selection process. These factors include AB 617 and Blueprint criteria, the CARB Board's direction, nominations received since the program inception and statewide assessment, lessons learned from the initial selected communities, and funding levels provided by the Legislature described further in the paragraphs below.

AB 617 and Blueprint Assessment Criteria – AB 617 requires CARB to select communities consistent with the statute and CARB's Blueprint (referred to as the statewide assessment and monitoring plan in statute) criteria.[2] Consistent with statute, the Blueprint outlines criteria and other factors for consideration to assess and identify locations with high exposure burdens for toxic air contaminants and criteria air pollutants, prioritizing disadvantaged communities and sensitive receptor locations in communities with high exposure burdens for toxic air contaminants and criteria air pollutants.[3]

CARB Board Direction – In the board meeting considering community selection in 2018, the CARB Board provided guidance on community selection for subsequent years. [4] The CARB Board directed staff to prioritize those communities that were priority recommendations from air districts and community based organizations in previous years, but not selected. In addition to any new communities, the CARB Board also prioritized transitioning those communities that were selected for air monitoring only to develop an emissions reduction program, if the recommendation is supported by data and by the community steering committee. In the 2019 board meeting considering

[1] Community Air Protection Blueprint, October 2018, available at https://ww2.arb.ca.gov/capp-blueprint
[2] Health & Safety Code § 42705.5 and 44391.2.
[3] Health & Safety Code § 42705.5 (b) and (c).
[4] CARB Board Meeting Transcript, September 27, 2018, available at https://ww3.arb.ca.gov/board/mt/2018/mt092718.pdf?_ga=2.268013452.364769911.1603819659-1647288959.1528825053

community selection, the Board requested a way to recognize communities repeatedly recommended by the community and/or air districts with strong support. This led to staff preparing a list meeting this criteria, recognizing the strong advocacy from the community and/or the district. This list is provided in Appendix A.

Nominations and Statewide Assessment - Since the Program's inception, CARB staff has received hundreds of recommendations for communities, most of which meet the statutory requirements for selection. CARB staff considers these nominations as part of a statewide assessment developed in 2018 to inform staff's community recommendations to the CARB Board.[5] The statewide assessment, consistent with statue 44391.2(b)(1), is a quantitative means to describe the cumulative air pollution burden of a community and includes a variety of readily available data sources, such as CalEnviroScreen 3.0, emissions inventory for mobile, area-wide and stationary sources, and Healthy Places Index. The assessment will be updated as new data becomes readily available to integrate in the analysis. This information complements the more detailed local community-level assessments.

To date the public has nominated over 120 unique communities[6] and new communities are nominated every year. From air districts and community organizers, we have a broad list of over 300 candidate communities identified for inclusion in the program, with the majority designated as disadvantaged communities. CARB staff and the air districts have worked closely with community members and community based organization to develop priorities for this year's recommendations in consideration of CARB Board's direction. Based on this process, CARB staff received eight recommendations for individual or combined communities this year via submissions by local air districts. Five of the communities nominated were also nominated in 2019 by community members, air district, community-based organization, or a combination thereof. One of the communities is an existing monitoring community and was nominated to transition to develop and implement a community emissions reduction program. Community nominations received in 2020 are summarized in Appendix A, all of which were previously included in the statewide assessment completed in 2018.[7]

On-going Consideration of Lessons Learned - One of the important lessons learned from the first years of the Program is that it takes time to build new

[5]For more information of Statewide Assessment, visit Preliminary Table of Metrics at https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/community-selection/2018-community-selection-0

[6] More information on the communities nominated is available at https://ww2.arb.ca.gov/capp-selection under Community Nominations List

[7] The assessment completed in 2018 was not updated this year because no new data was readily available to integrate in the assessment. More information on the 2018 assessment is available at: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program.

community partnerships and develop community programs that are critical for successful development of a community monitoring plan or community emissions reduction program. Significant resources are needed to develop and implement these plans. To sustain the Program and effectively add more communities in the future, the initial communities selected in 2018 and 2019 should serve as models to transfer knowledge and lessons learned so future communities can develop and successfully implement emissions reduction programs. CARB's website provides information about selected communities as well as tools to help develop community monitoring plans and community emissions reduction programs.[8] In addition, for those districts that had communities selected in prior years for community air monitoring only, CARB staff believes it is important that those communities gain experience with development of a community emissions reduction program prior to selection of additional communities in that air district.

Funding - The State budget maintains the same level of implementation funding in fiscal year 2020-21 as fiscal year 2019-20. The statutory goal of this Program is to reduce emissions in high exposure burdened communities in California. Continued and increased support is needed to effectively implement the work that has begun to develop and implement new plans, and adding communities without increased funding restricts the amount of resources that can go to each community. Currently, the emissions reduction plans for the initial communities are in the early stages of implementation or finishing the development process to move into implementation. Funding is critical to successfully develop and carry out the actions in these plans that result in measurable emissions and exposure reductions in the communities. To ensure resources are available to support the existing, as well as, new communities, CARB staff recommends limiting the number of new communities selected to two, while transitioning one 2018 monitoring community to develop a community emissions reduction program.

II. Staff Recommendation

Staff have worked with community members, air districts, community based organizations, and other stakeholders to develop this 2020 recommendation of new communities in the Community Air Protection Program. Staff hosted virtual public meetings on June 30, 2020 and November 6, 2020, to discuss the 2020 recommendations. Based on criteria set forth in AB 617 and the Blueprint, public feedback in the virtual meetings, and previous CARB staff analysis conducted to

[8] CARB Community Air Protection Program, Communities, available at https://ww2.arb.ca.gov/capp-communities ; CARB Community Air Protection Program Resource Center, available at https://ww2.arb.ca.gov/ocap_resource_center .

characterize the emissions burden of communities throughout the State in the statewide assessment, staff are recommending:

- The Richmond-San Pablo Community in the BAAQMD selected for community air monitoring plan in 2018, transition to develop and implement a community emissions reduction program.

- The Arvin, Lamont Community in the SJVAPCD be selected to develop both a community air monitoring and emissions reduction programs.

- The South Los Angeles community in the SCAQMD be selected to develop both a community air monitoring and emissions reduction programs.

Table 1 provides a summary of staff's recommendations, key emission sources, and rationale for the recommended community selections.

Table 1. 2020 Community Recommendations – In Alphabetical Order by Air District

Community (Air District)	**Action**	**Key Emission Sources**	**Rationale**
Richmond-San Pablo (Bay Area)	Transition to developing a Community Emissions Reduction Program	Freeways Industry Port Rail Refinery Urban	Consistent with CARB Board direction to prioritize moving monitoring programs to emissions reduction programs. The community steering committee and Air District Board support this transition.
Arvin, Lamont (San Joaquin Valley)	Develop a Community Air Monitoring Plan and Emissions Reduction Program	Agriculture Rural Warehouses	Consistent with CARB Board direction to prioritize communities recommended by community based organizations in previous years but not selected yet. Nominated this year and in 2019 by Air District Board with strong support from community based organizations.
South Los Angeles (South Coast)	Develop a Community Air Monitoring Plan and Emissions Reduction Program	Freeways Industry Oil & Gas Urban	Consistent with CARB Board direction to prioritize communities recommended by community based organizations in previous years but not selected. Nominated by Air District Board with strong support from community based organizations.

Figure 1 shows where the 2020 recommended communities are located along with communities selected in 2018 and 2019.

Figure 1. 2020 Community Recommendations and Prior Community Selections

Community profiles presented in Section IV of this document provide additional community details including a community description, current community engagement, and preliminary air quality and emissions inventory data. These community profiles provide only a preliminary assessment of the recommended community using readily available information. If the community is selected as a 2020

AB 617 community by the CARB Board, CARB staff, and the air districts will collaborate with the community to refine this analysis and provide the methodology, original or updated data including 2019 data[9], and updated results to the community steering committee.

III. Statewide Efforts to Benefit Communities

CARB continues its statewide efforts to improve air quality in all communities, so that communities not developing or implementing community emissions reduction programs can benefit. CARB's regulatory strategies include Mobile Source and Fuel Regulations, Air Toxics Hot Spots Program, Mobile and Stationary Airborne Toxic Control Measures, air district rules and enforceable agreements with railyards. AB 617 requires new, community-focused actions that go beyond existing State and regional programs to reduce exposure to air pollution in communities affected by a high cumulative exposure. CARB staff is continuing to prioritize work to drive cleaner technology, implement operational changes, and reduce exposure in air emissions burdened communities statewide as soon as possible.

Regulatory Actions

Regulations are at the core of CARB's air quality improvement efforts and Appendix F of the Blueprint identifies statewide actions focusing on reducing emissions from sources that directly affect communities. CARB staff has initiated development on regulatory measures are identified here:

- **Cargo Handling Equipment Regulation**[10] – CARB staff is assessing the availability and performance of zero-emission technology to further reduce emissions associated with this regulation. Mobile cargo handling equipment is any motorized vehicle used to handle cargo or perform routine maintenance activities at California's ports and intermodal rail yards. The type of equipment includes yard trucks (hostlers), rubber-tired gantry cranes, container handlers, forklifts, etc. The Mobile Cargo Handling Equipment (CHE) Regulation was adopted in 2005 to reduce toxic and criteria emissions to protect public health, amended in 2011, and fully implemented by the end of 2017.

- **Commercial Harbor Craft Regulation**[11] – CARB staff is considering amendments to this regulation that reduces toxic and criteria pollutant emissions from certain

[9] AB 617 Community Planning Emission Inventory: Inventory Years. Available at https://ww2.arb.ca.gov/sites/default/files/2020-07/AB%20617%20Calendar%20Years%20for%20Community%20Planning%20Emission%20Inventories%202020-02-26.pdf.

[10] For more information on the regulation, visit: https://ww2.arb.ca.gov/our-work/programs/cargo-handling-equipment.

[11] For more information on the regulation and potential new regulatory concepts, visit: https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft.

harbor craft. CARB's existing commercial harbor craft regulation was adopted in 2007, amended in 2010, and will be fully implemented by the end of 2022. In December 2018, March 2020, and September 2020, CARB hosted three public meetings to discuss the Draft Proposed Amendments to the Airborne Toxic Control Measure (ATCM) for Commercial Harbor Craft Regulation. CARB staff tentatively plans to take the amended regulation to the board in mid-2021.

- **Reducing Rail Emissions in California**[12] – In the absence of federal action to address harmful emissions from locomotives, CARB is developing in-use locomotive regulatory concepts to reduce criteria pollutants, toxic air contaminants, and greenhouse gas emissions. These concepts are intended to be implemented statewide, and provide an opportunity for the railroads to better address regional pollution and long-standing environmental justice concerns with communities near railyards. Board consideration is tentatively scheduled for 2022.

- **Chrome Plating Control Measure Amendments**[13] This strategy will amend the current regulation on chrome plating to further reduce toxic air contaminants at chrome plating facilities. In September 2020, a meeting of the technical work group was held to discuss concepts. A tentative ATCM timeline is to finalize concepts in early 2021 and hold workshops for regulation in the summer and fall of 2021.

CARB has developed a website to give an overview of the CARB and air district community emissions reductions program strategies[14]. Other strategies recognized include enforcement of CARB and air district regulations, In-Use Testing, Supplemental Environmental Projects and incentive programs.[14]

Transferring Benefits to All Burdened Communities

Continued successful and sustainable implementation of the Community Air Protection Program requires collecting the lessons learned from work done in the initial communities and transferring that knowledge to other communities statewide. A continued goal is to evaluate options to transfer knowledge, resources and strategies to all disadvantaged and emissions burdened communities statewide, passing the benefits from the first communities to other communities without waiting for formal selection.

[12]For more information on Reducing Rail Emissions in California, visit: https://ww2.arb.ca.gov/our-work/programs/reducing-rail-emissions-california/about

[13] For more information on Chrome Plating ATCM, visit: https://ww2.arb.ca.gov/our-work/programs/chrome-plating-atcm/about

[14] Overview of CARB and Air District Strategies is available at https://ww2.arb.ca.gov/overview-carb-and-air-district-strategies

Community Air Grants Program

AB 617 created opportunities to increase community involvement through grants for community-based organizations. CARB created the Community Air Grants Program[15] to implement this statutory directive to provide support for community-based organizations to participate in the AB 617 process, and to build capacity to become active partners with government to identify, evaluate, measure, and ultimately reduce air pollution and exposure to harmful emissions in their communities. For 2018 and 2019, $15 million was awarded to almost 60 projects. In winter 2020/2021, the Community Air Grants Program anticipates soliciting for additional projects, up to $10M in funding, to support the Program.

Community Air Protection Incentives

Since 2017, in support of AB 617, the Legislature has budgeted $704 million in incentive funding that allow immediate actions to improve the air quality in heavily emissions burdened communities across the State. Grant funds may be used for mobile source projects pursuant to the Carl Moyer or Proposition 1B Programs. More recently, the State budget also allowed funding to be used for upgrades at local industrial facilities that reduce emissions of toxic or smog-forming pollutants, construction of zero-emission charging stations, or the support of local measures that air districts and communities identify through community emissions reduction programs[16]. In response, CARB has developed updated guidance, incorporating this flexibility to allow new types of projects to provide direct benefits to the selected community.

The Community Air Protection Incentives have no dedicated funding source; the funding amount appropriated from the Greenhouse Gas Reduction Fund varies from year-to-year. There are over 50 programs competing for the Greenhouse Gas Reduction Funds and the amount for the AB 617 Program can fluctuate greatly with no guaranteed annual funding from the Legislature. The incentive funding for fiscal year 2020-2021 has not been determined; with the current budget shortfalls and uncertain auction proceeds the Community Air Protection incentive funds are uncertain.

Other Statewide Efforts

CARB and air district staff are undertaking additional efforts that will benefit hundreds of communities statewide, including:

- Air district implementation of updated best available retrofit control technology at industrial sources on an expedited schedule in non-attainment areas pursuant to AB 617.

[15] More information on the Community Air Grants is available at https://ww2.arb.ca.gov/capp-cag
[16] For more information on community identified projects see: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-incentives

- Community Air Quality Monitoring Portal[17]: AQview, an online air quality system, focuses on accessibility, exploration, and visualization of air quality data collected throughout California. AQview includes data from a variety of sources, including community organizations and state/local agencies so community members can get a comprehensive view of air quality in their area. AQview is currently under construction and scheduled to launch in phases; new features will continue to be released over time. CARB's AQview staff is currently working to implement quality checks on data to help provide more information and highlight probable erroneous values for users without modifying or obscuring the original data. Data quality check information will be available in AQview's downloadable files by late 2020.

- CARB is funding two studies to examine the impacts of chronic air pollution exposure on the risk, progression, and severity of COVID-19. One of these studies will examine the impacts of air pollution exposure on COVID-19 statewide and the second study will use data from Kaiser Permanente members in Southern California to examine these effects. Both studies will investigate the vulnerability that race, ethnicity and income cause to those impacted by COVID 19 and how disadvantaged neighborhoods may be more at risk from the effects of COVID-19 and air pollution exposure.

[17]The Community Air Quality Portal and AQview is available at: https://aqview.arb.ca.gov/data.html

IV. Community Profiles

This section summarizes community profiles based on available information for the three communities recommended by staff for selection. It is important to note that the boundaries for the communities described in each community profile are preliminary and correspond to the air districts' recommended preliminary community boundaries. If selected by the CARB Board, each community steering committee in consultation with community members, the air district, and interested stakeholders is anticipated to further refine the proposed boundaries for the community.

a. Richmond-San Pablo Community

i. Staff Recommendation – Transition this 2018 community to develop and implement a community emissions reduction program, in addition to continued implementation of the 2018 community air monitoring plan

In September 2019, the Richmond-San Pablo community monitoring steering committee voted to transition the community from a monitoring-only community to a community emissions reduction program community beginning in 2021. In October of this year, the BAAQMD nominated the community for this transition. CARB staff supports this nomination and recommends the CARB Board select the Richmond-San Pablo Community for the development and implementation of a community emissions reduction program.

The Richmond-San Pablo area in western Contra Costa County is in the jurisdiction of BAAQMD. The people who live in the area are exposed to emissions from a large refinery and chemical plant, a petroleum coke terminal, organic liquid storage and distribution facilities, freeways, rail yards, a seaport, and many small to medium industrial and manufacturing sources. Compared to the rest of Contra Costa County, the area has more asthma emergency room visits and a higher rate of cardiovascular disease[18]. The area also has higher unemployment, lower educational attainment, higher housing cost burden, and lower life expectancy than the rest of Contra Costa County.[18]

The community monitoring steering committee and the BAAQMD are working together to implement the adopted monitoring plan to develop emission data collection strategies that will help locate sources of air pollution that are impacting their community. Mobile monitoring is being performed in parallel to collect community-wide data. Air monitoring will continue into the first quarter of 2021.[18]

[18] Additional information for the Bay Area Air Quality Management District, *AB 617 Richmond-San Pablo Community Air Monitoring Plan*, Version 2.1. July 2020 available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/richmond/richmondsanpabloairmonitoringplanjuly2020-pdf.pdf?la=en

ii. Community Description

Figure 2 depicts the Richmond-San Pablo Community preliminary boundary, which spans approximately 28 square-miles and has an approximate population of 150,000. The community area includes most of the cities of Richmond and San Pablo. It also includes the adjacent communities of North Richmond, Montalvin, and parts of Tara Hills, El Sobrante, and the Richmond Annex. This existing boundary for the community associated with the air monitoring plan is proposed as the preliminary boundary for the community for purposes of its recommendation for selection to develop a community emissions reduction program.

Many of the residents in this area live close to major sources of pollution and experiences disproportionately high health burden as seen in Figure 3. According to 2018 emissions data reported to CARB by BAAQMD,[19] there are 215 stationary sources within the community, five of which are Cap-and-Trade facilities that emit large amounts of carbon dioxide, as well as other harmful criteria and toxic air contaminants.[20] These include a petroleum refinery, a chemical plant, a coal and petroleum coke terminal, organic liquid storage and distribution facilities, wastewater treatment plants, a landfill, organic waste metal facilities, and industrial and manufacturing plants of various sizes. There are also many smaller sources of air pollution that are located within residential areas, including auto body shops, paint shops, restaurants, and gas stations. The sensitive receptors in the community include 130 schools, 159 senior care facilities, 226 daycare facilities, and 19 hospitals or clinics.[21]

Most of this community is considered disadvantaged per SB 535[22] and low-income per AB 1550.[23] The key CalEnviroScreen (CES) indicators, such as particulate matter (PM) 2.5 microns or smaller (PM2.5), diesel particulate matter (DPM), are highlighted in Table 2 below. The overall CES score for the Richmond-San Pablo community is at the 95th percentile, which meant higher pollution burden is placed on the people living in the community than 94 percent of the 8,000 census tract in California.

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[19] Data Source: Based on Air District reported 2018 facility emissions to CARB. Air Districts report criteria and toxics emissions from facilities to CARB's California Emission Inventory Development and Reporting System (CEIDARS). Facilities report GHG emissions to CARB's Greenhouse Gas Mandatory Reporting Regulation, Facility Search Engine: https://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php. Pollution Mapping Tool: https://ww3.arb.ca.gov/ei/tools/pollution_map/

[20] CARB's Cap-and-trade Program is a market-based approach to control carbon dioxide – a greenhouse gas – pollution by setting a firm cap on allowed emissions while driving the cost of reductions down by allowing for emissions trading and the purchase of offsets. For more information about the Cap-and-Trade Regulation, visit https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program

[21] Data Source: https://bit.ly/2Ww1lVC, https://www.baaqmd.gov/~/media/files/ab617-community-health/richmond/richmondsanpabloairmonitoringplanjuly2020-pdf.pdf?la=en

[22] Disadvantaged community designations per Senate Bill (SB) 535 (De León, Chapter 830, Statutes of 2012)

[23] Low-income definitions per Assembly Bill (AB) 1550 (Gomez, Chapter 369, Statutes of 2016)

Figure 2. Richmond-San Pablo Community Detail

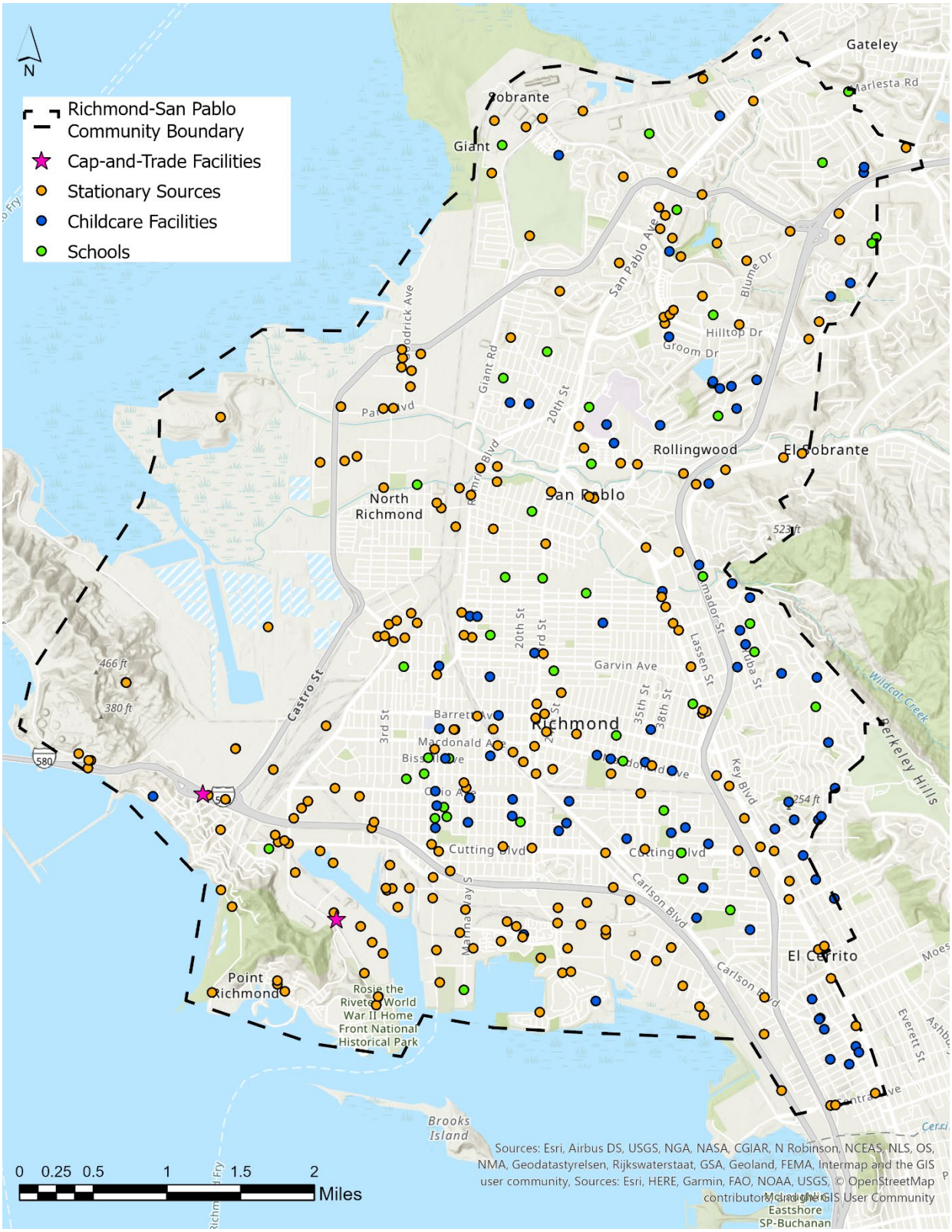


Figure 3. Richmond-San Pablo Community Photo

Table 2. Key CalEnviroScreen 3.0 Indicators for Richmond-San Pablo [24, 25]

Overall Score	PM2.5	DPM	Asthma	Cardiovascular Disease	Poverty	Unemployment	CA Healthy Places Index
95	31	95	100	92	85	92	84

iii. Community Engagement

When this community was selected for community monitoring in 2018, BAAQMD set up the Richmond-San Pablo Community Design Team, which – with assistance from the BAAQMD – selected 35 people to serve on their community monitoring steering committee. The committee's members were selected from a range of organizations and sectors that was intended to reflect the diverse makeup of the Richmond-San Pablo Area. The committee brings together an inclusive group of stakeholders which represent people who live in the area, members of neighborhood councils, and non-

[24] Data Source: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. More information on California Healthy Places Index available at https://healthyplacesindex.org/about/

[25] The CES 3.0 Score and CA Healthy Places Index are the highest overall percentiles of a census tract found within the boundary.

profits serving people who live in the area.[26] Steering committee members participate in monthly public meetings to discuss sources of air pollution, potential monitoring locations, monitoring equipment, incentive funding opportunities, ways to reduce emissions, and other topics of interest related to the community. Some steering committee community members join the BAAQMD on a co-lead team to develop meeting agendas, provide necessary background materials for steering committee members, coordinate with the facilitation team, and lead Steering Committee activities.

CARB Community Air Grants Awardees

The community based organizations below received Community Air Grants in either 2018 or 2019 to implement their AB 617 proposed project through March 2021 or 2022.

The following grants were awarded in 2018:

- Groundwork Richmond was awarded $499,006 to focus on outreach, training community members to collect data, and setting up an air monitoring network in Richmond. They experienced setbacks due to the pandemic and shelter in place direction that affected staff resources, but currently have over 50 air monitors sited. This group is also working with CARB's AQview staff to share the data with public.

- Physicians, Scientists, and Engineers for Healthy Energy was awarded $500,000 and will focus their project in Richmond, North Richmond, and San Pablo. The project monitors have been sited, and PSE is currently working with CARB and Air District on outreach around the data being collected. The collected emissions data is expected to be displayed in "real-time" starting Fall 2020. Data will be available in AQview.

- Communities for a Better Environment (CBE) was awarded $97,857 to focus their project partly in Richmond, but also in South East Los Angeles, Wilmington, and Rodeo. The project supports pollution prevention of oil refineries, extraction, mobile sources, and other pollution sources through organizing leadership training, technical and legal support, Spanish translation, health and regulatory education, participation in regulatory processes.

[26] For a full list of community steering committee members for the Richmond-San Pablo community, visit: https://www.baaqmd.gov/~/media/files/ab617-community-health/richmond/07292020-meeting/scmtg15summary-pdf.pdf?la=en.

The following grants were awarded in 2019:

- CBE was awarded $99,998 for their CBE Communities 2020 617 Engagement for Clean Air Project. This project compliments their 2018 grant award by supporting engagement and participation in AB 617 processes in South East Los Angeles, Wilmington, Richmond and Rodeo, and Statewide, and supports air regulatory development for air pollution sources in East Oakland.

- Groundwork Richmond, Inc. was awarded $299,095 for their Air Rangers II: Citizen Science Environmental Monitoring - Capacity Building Program. This project extends a near-real time air quality monitoring, modeling, and information-dissemination program (Air Rangers) that is critical to the development and evaluation of planned community emissions reduction intervention in one of the most highly affected disadvantaged communities in California. Black carbon concentration data will be collected, relevant information to Richmond communities will be disseminated to remove barriers to participation in the growing effort to reduce local emissions, and Richmond community will be further engaged to understand and ameliorate their air pollution exposure. This project will also provide Richmond youth with job opportunities, powerful quantitative and marketable skills in environmental data science, advocacy, and research.

- Human Impact Partners was awarded $256,158 for their Assessment of Coal and Petcoke Project. This project involves local air quality monitoring that detects coal-specific particulate matter air pollution at a current coal terminal in Richmond and associated rail lines. Dispersion modeling will be conducted to create a neighborhood risk profile of ambient coal-related PM concentrations. Based on that profile, mortality, morbidity, and health services impacts expected from the exposure will be quantified.

- Physicians, Scientists, and Engineers for Healthy Energy was awarded $299,786 for the Richmond Air Monitoring Network Phase II: Black Carbon and Particulate Matter Characterization Project. This project will serve the cities of Richmond, North Richmond and the San Pablo areas. The project takes advantage of existing community engagement efforts, monitoring sites, and data visualization platforms to expand the Richmond Air Monitoring Network for increased collection and understanding of air pollution in the Richmond area. It will take advantage of existing community engagement efforts, monitoring sites, and data visualization platforms.

- The Rose Foundation for Communities and the Environment was awarded $45,015 for their The Bay Area Youth (BAY) Air Action Plan Project. This project will serve the Oakland and Richmond areas and complements the 2018 grant that they received to serve Oakland. The project will strengthen youth engagement in AB 617-related planning and community outreach by broadening community knowledge about air pollution and its health impacts in

the area, encouraging participation in AB 617 planning and participation by young people and community members, and building a broad base of support for action to address long-standing pollution problems.

iv. Air Quality Burden Assessment

The discussion presented here summarizes the air quality burden in and around the Richmond-San Pablo Community and highlights the current air quality issues the community is experiencing. The burdens identified support staff's recommendation that this community be selected in 2020 to transition to a community emissions reduction program.

a. Ambient Air Quality Data

The San Pablo-Rumrill[27] site is a regulatory air quality monitoring station in the center of the community (Figure C-2 in Appendix C). While PM2.5 concentrations typically peak during winter (December to February) months, the average PM2.5 concentrations in the Richmond-San Pablo community are highest in the warmer fall (September to November) and summer (June to August) months as shown in Figure 4. Between 2016 and 2018, the annual average concentrations of PM2.5 showed an upward trend and exceeded the federal standards of 12 $\mu g/m^3$ in 2018. The frequency of wildfires were significantly higher in 2017 and 2018,[28] and smoke from these wildfires likely caused a spike in measured PM2.5 concentrations.

[27] Air Monitoring Site Information for San Pablo-Rumrill: https://ww3.arb.ca.gov/qaweb/site.php?s_arb_code=07447

[28] Richmond – San Pablo Community Air Monitoring Plan Steering Committee Meeting#3, available at https://www.baaqmd.gov/~/media/files/ab617-community-health/richmond/051519-meeting/steering_committee_meeting_051519_final-pdf.pdf?la=en, Page 46-47.

Figure 4. Average PM2.5 Concentrations for San Pablo-Rumrill (ARB: 07447) [29]

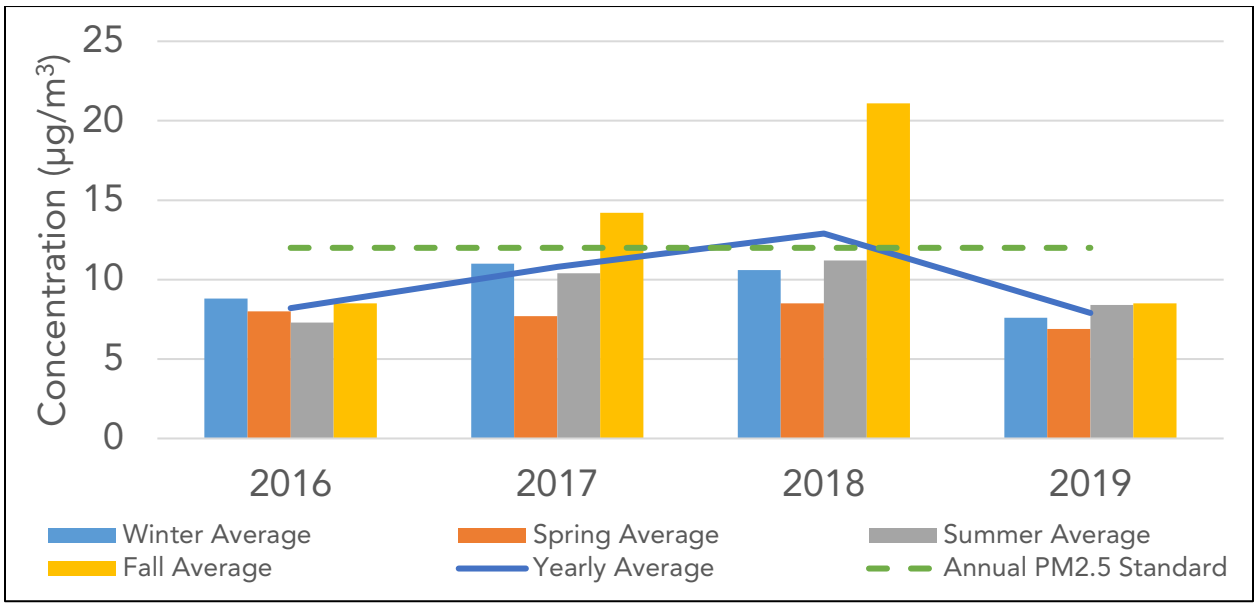
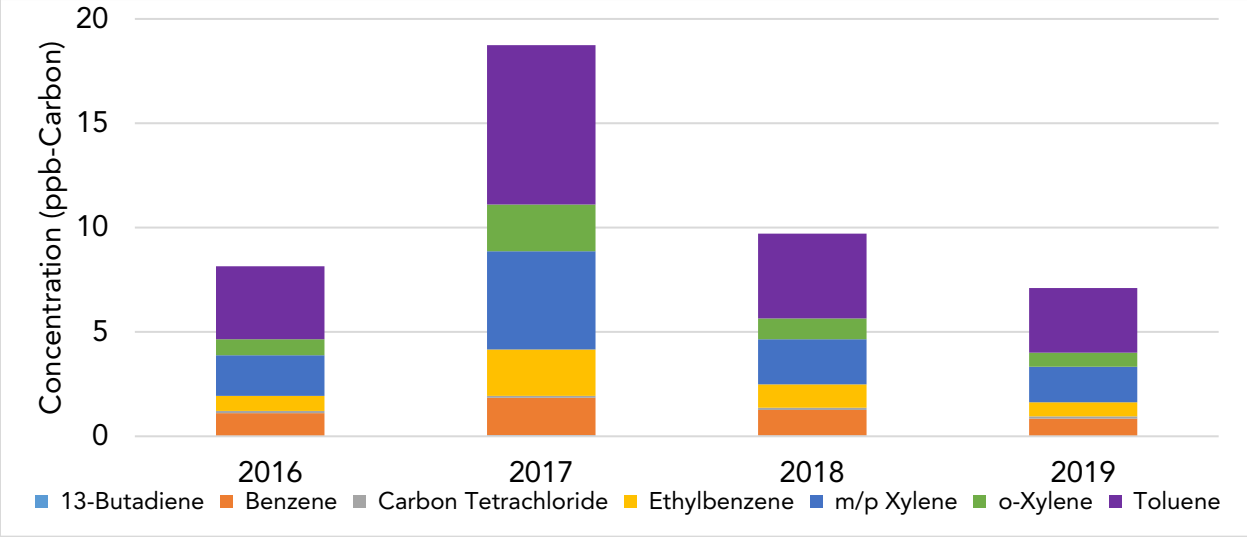


Figure 5 shows the 2016 and 2019 yearly concentration of volatile organic compounds (VOCs) including 1,3 - butadiene, benzene, carbon tetrachloride, ethylbenzene, m/p – xylene, o – xylene, and toluene. People exposed to these VOCs species at elevated concentrations and for a prolonged period have an increased chance of suffering from carcinogenic and non-carcinogenic health issues.[30] Exposure to these species at acute or chronic Reference Exposure Levels (REL) can damage the alimentary, hematologic, reproductive, and respiratory systems.[31] In 2017, the annual average concentrations of these VOCs more than doubled over the previous year. However, despite the significant increase from 2016's concentration, none of the seven VOCs species exceeded their chronic REL threshold, which are 3.6 ppb-C for 1,3-butadiene, 5.6 ppb-C for benzene, 6.4 ppb-C for carbon tetrachloride, 3,686 ppb-C for ethylbenzene, 1,290 ppb-C for the xylenes, and 780 ppb-C for toluene.[31]

[29] Data Source: https://www.epa.gov/outdoor-air-quality-data
[30] More information on Hazardous Air Pollutants available at https://www.epa.gov/haps and https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications
[31] OEHHA Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary: https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary

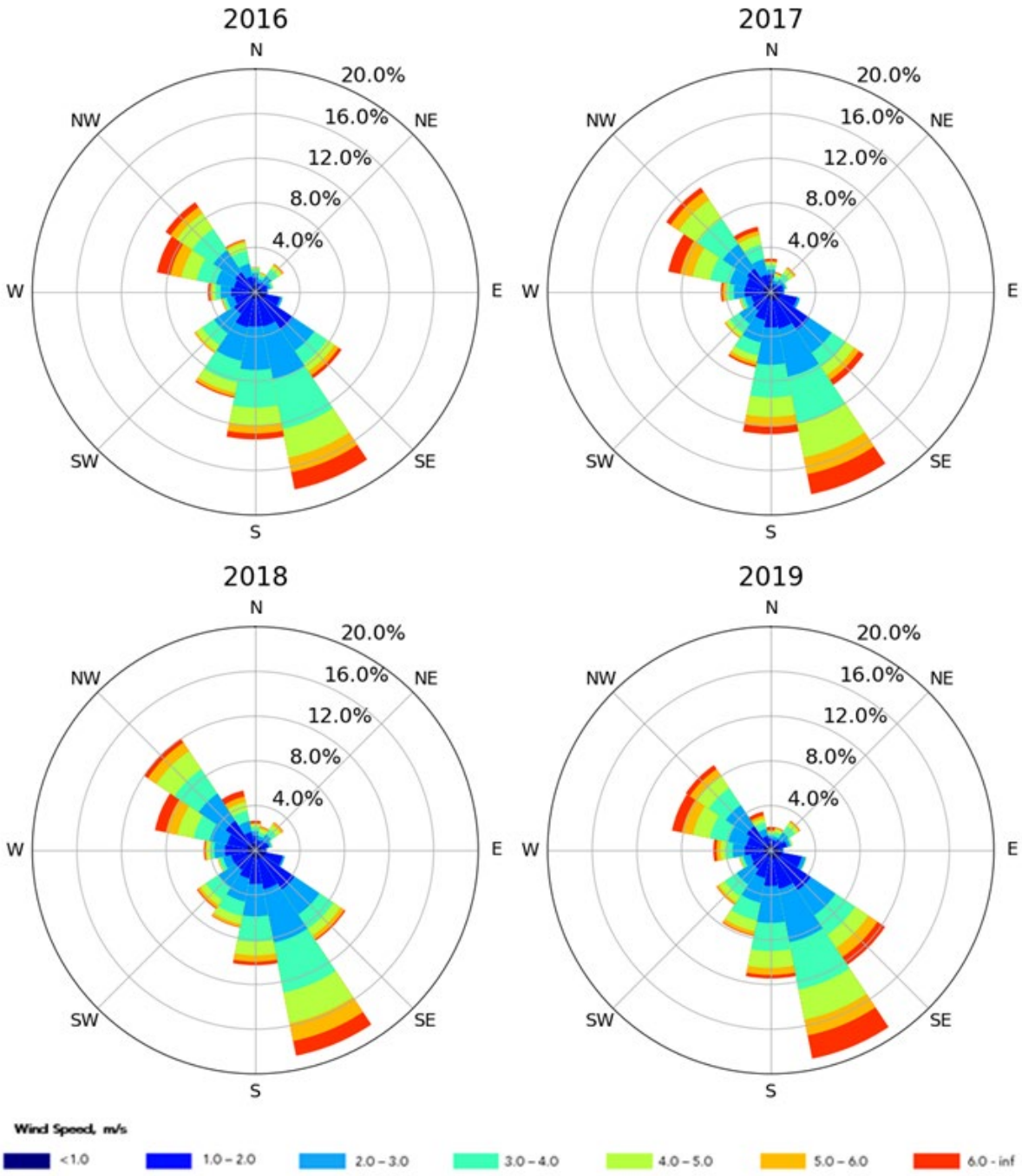
Figure 5. Average VOCS Concentrations for San Pablo-Rumrill (ARB: 07447) [32]



The closest meteorological station to the community with complete metrological data from 2016 to 2019 is operated by the National Oceanic and Atmospheric Administration (NOAA) and is located at the Chevron Long Wharf in Point Richmond, (roughly 4 miles southwest of the San Pablo-Rumrill site where the PM2.5 and VOC's were measured). The wind rose[33] in Figure 6 shows that predominant wind at the Chevron Long Wharf meteorological station comes from the south and southeast. Wind from the northwest of the station is also significant. Wind trajectories measured at the meteorological station may be representative of the wind trajcectories in the community. It is therefore plausible that air pollutants from the industrial sources surrounding the coast could impact densely populated areas of the community by these onshore winds.

[32] Data Source: https://www.epa.gov/outdoor-air-quality-data. Measurements under method detection limit (MDL) are replaced with ½ MDL. Missing measurements were listed as null.
[33] For a description on how to read a wind or pollutant rose see Appendix D in this document.

Figure 6. Wind Roses for Richmond, CA (9414863)[34]



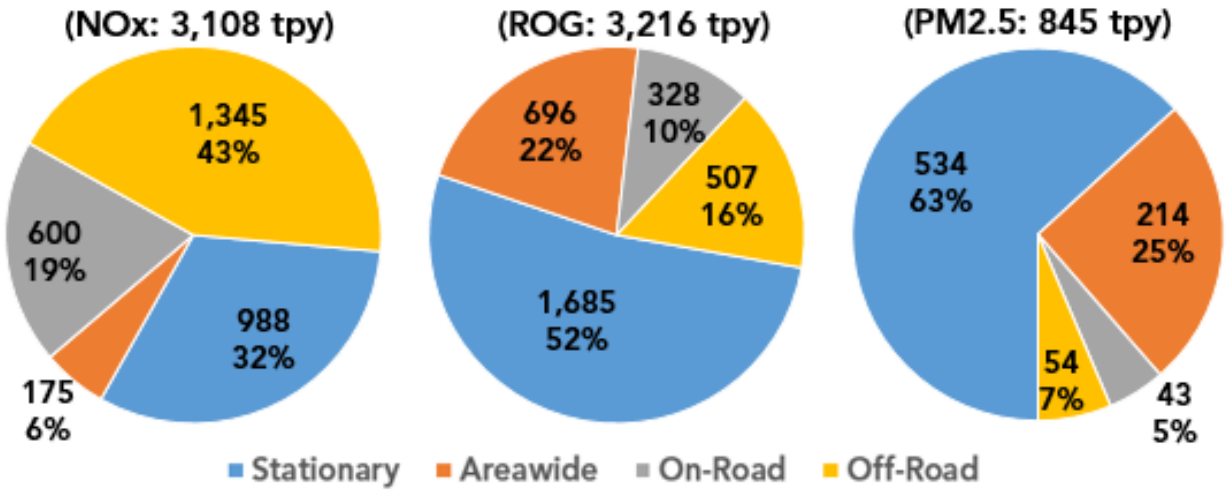
[34] Data source: http://erddap.cencoos.org/erddap/tabledap/noaa_nos_co_ops_9414863.html

b. Preliminary Emissions Inventory Estimates

A preliminary emissions inventory based on the proposed community boundary was developed by CARB to quantify emissions of mobile (on-road and off-road), stationary, and areawide sources in the community. Details on the methodology used are provided in Appendix E in this document. Figure 7 summarizes the draft estimated emissions for key air pollutants, such as nitrogen oxides (NOx), reactive organic gases (ROG), and particulate matter 2.5 microns or smaller (PM2.5) for this community.

Figure 7. Preliminary Source Contributions in the Richmond-San Pablo Community

(2019 Preliminary Emissions in Tons/Year, tpy)



The activities that contribute to these emissions are listed in Table 3 and are detailed in Table E.a.1 in Appendix E, along with an initial spatial distribution based on a preliminary planning emissions inventory.

Table 3. Top Source Categories by Stationary, Areawide, and Mobile for the Richmond-San Pablo Community

(Preliminary Emission Inventory for 2019) [35]

Stationary Sources			
PM2.5	**Percent**	**ROG**	**Percent**
Petroleum Refining (Combustion)	61.7%	Petroleum Refining	30.0%
Petroleum Refining	17.9%	Other (Industrial Processes)	23.3%
Chemical	6.6%	Petroleum Marketing	12.5%
Manufacturing and Industrial	4.8%	Petroleum Refining (Combustion)	8.6%
Service and Commercial	3.3%	Coatings and Related Process Solvents	6.3%
Area Sources			
PM2.5	**Percent**	**ROG**	**Percent**
Residential Fuel Combustion	66.5%	Consumer Products	60.9%
Paved Road Dust	15.2%	Architectural Coatings and Related Process Solvents	25.9%
Cooking	10.5%	Residential Fuel Combustion	10.1%
Construction and Demolition	5.1%	Other (Miscellaneous Processes)	1.3%
Other (Miscellaneous Processes)	1.3%	Asphalt Paving / Roofing	0.9%
Mobile Sources[36]			
PM2.5	**Percent**	**ROG**	**Percent**
Light Duty Vehicles	28.1%	Light Duty Vehicles	28.6%
Off-Road Equipment	15.6%	Recreational Boats	27.3%
Recreational Boats	14.9%	Off-Road Equipment	20.7%
Ocean Going Vessels	12.8%	Medium Duty Vehicles	6.2%
Commercial Harbor Craft	10.7%	Commercial Harbor Craft	4.8%

Additionally, Figure 8 presents the emissions trends for NOx, PM2.5, and ROG in the San Francisco Bay Area Air Basin from 2012 through 2030 using projected emissions from the latest State Implementation Plan (SIP) emissions inventory.[37] The forecasted emissions from the 2016 SIP provide an initial assessment of future emission trends and air quality benefits in the air basin. This initial assessment reflects the effects of regional growth assumptions and adopted CARB and District rules as of March 2020, and provides an indication of the emissions trends that will be seen in the community because of existing emission reduction programs. A community-scale forecasted inventory will be developed to evaluate the air quality benefits of adopted rules and ongoing and potential future rulemaking activities if the Richmond-San Pablo is selected as a 2020 community.

[35] See Appendix E in this document for methodology and additional information on the emissions inventory. For more details on source categories and associated activities (emission inventory codes), see documentation at https://ww3.arb.ca.gov/ei/documentation.htm

[36] Explanation of vehicle categories: https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf

[37] Based on the latest SIP inventory with a 2017 base year (CEPAM 2019SIP v1.01).

Figure 8. Projected Emissions Trends for Major Source Categories in the San Francisco Bay Area Air Basin (Emissions in Tons/Day)

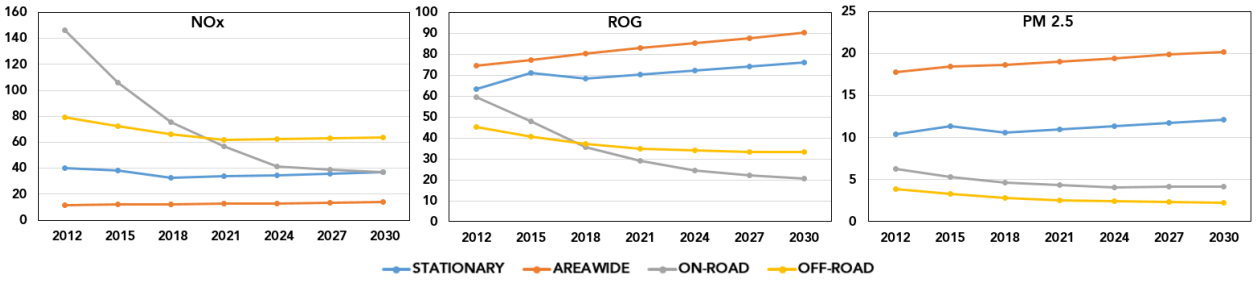
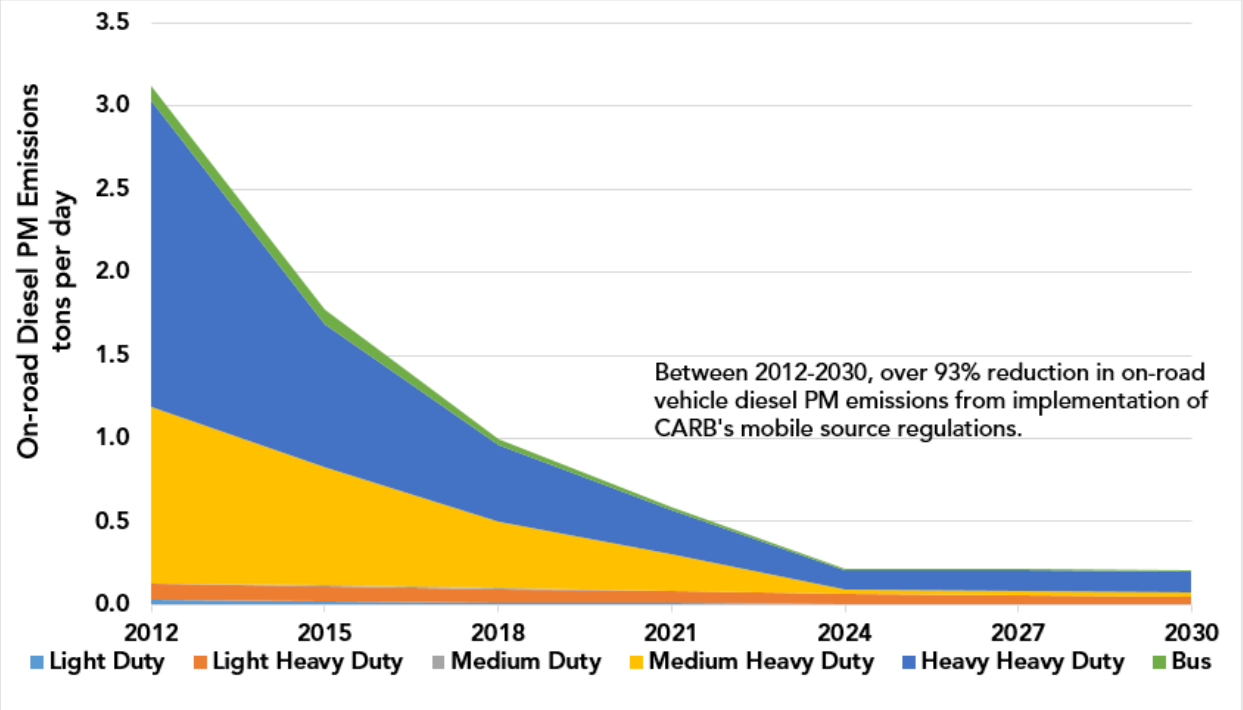


Figure 9 shows the trend of diesel particulate matter (diesel PM or DPM) emissions from on-road vehicles in the San Francisco Bay Area Air Basin. The emissions are projected to decrease significantly in future years from implementation of adopted mobile source regulations, including the Regulation to Reduce Emissions of DPM, NOx and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles (also known as the Truck and Bus Regulation).[38]

Figure 9. Projected Emission Trends for On-road Vehicle Diesel PM in the San Francisco Bay Area Air Basin (Emissions in Tons/Day) [38]



[38] For more information on the Truck and Bus Regulation, visit: https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation

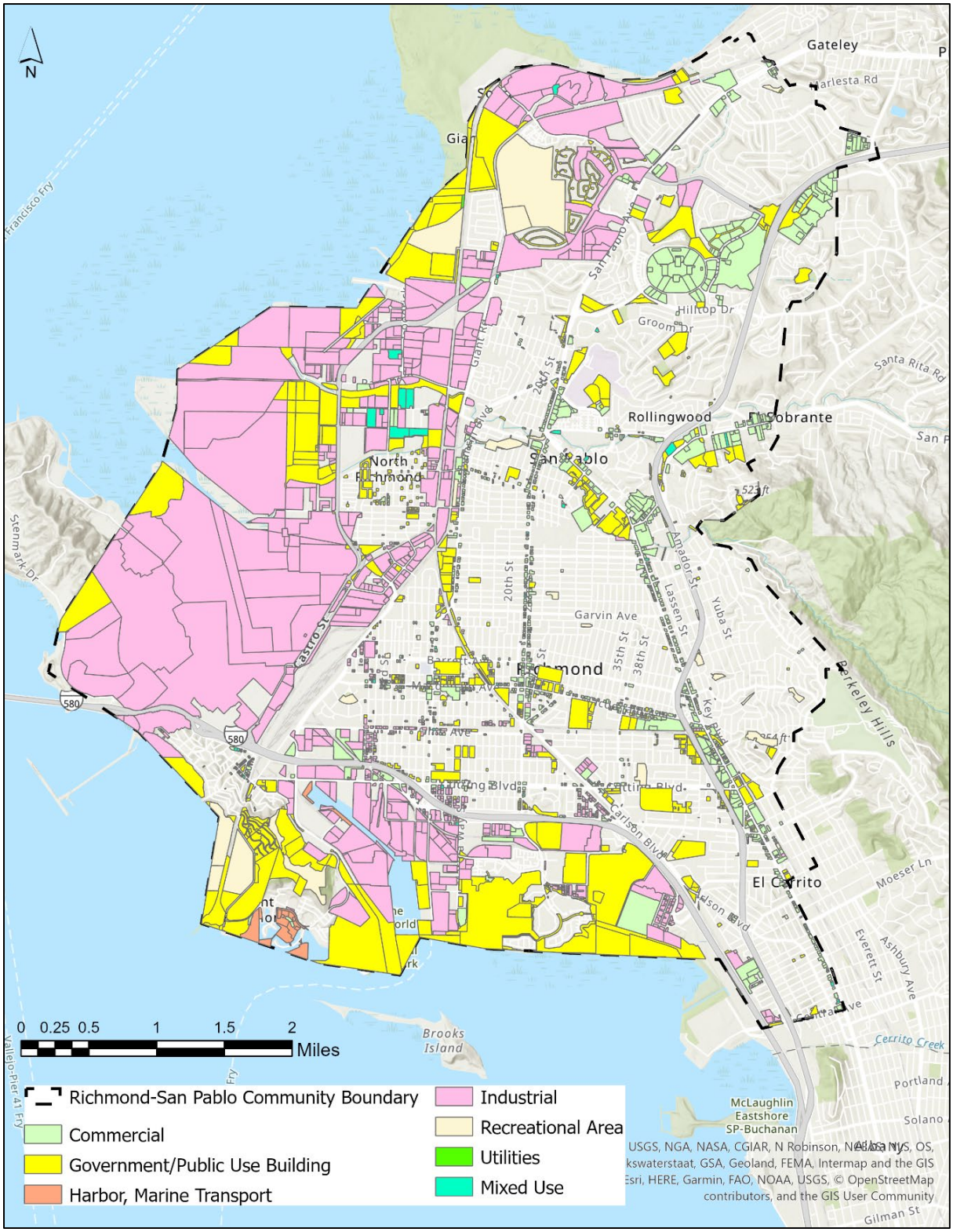
c. Proximity-Based Exposure

The Richmond-San Pablo community spans over 17,744 acres (approximately 28 square miles). The community's residential land use is about 35 percent, followed by 27 percent for industrial and 5 percent for commercial purposes. The map in Figure 10 illustrates the land use categories within the community boundary. Industrial zones are mostly located along the San Francisco Bay. Assessor Parcel Number (APN) data also shows the largest industrial land use is associated with vacant industrial land (1,859 acres), followed by heavy industrial (1,452 acres), light manufacturing (1210 acres), and industrial parks (241 acres).

The residential zones in the community are mostly outside of the industrial zones. However, a comparison of the maps in Figure 10 and Figure 11 show there are industrially zoned areas directly adjacent to some of the most densely populated areas in the community, such as the area along the Interstate 580, Castro St, and Richmond Parkway. Additional resources on land use planning information are available in the Resource Center on CARB's Community Air Protection Program website.[39]

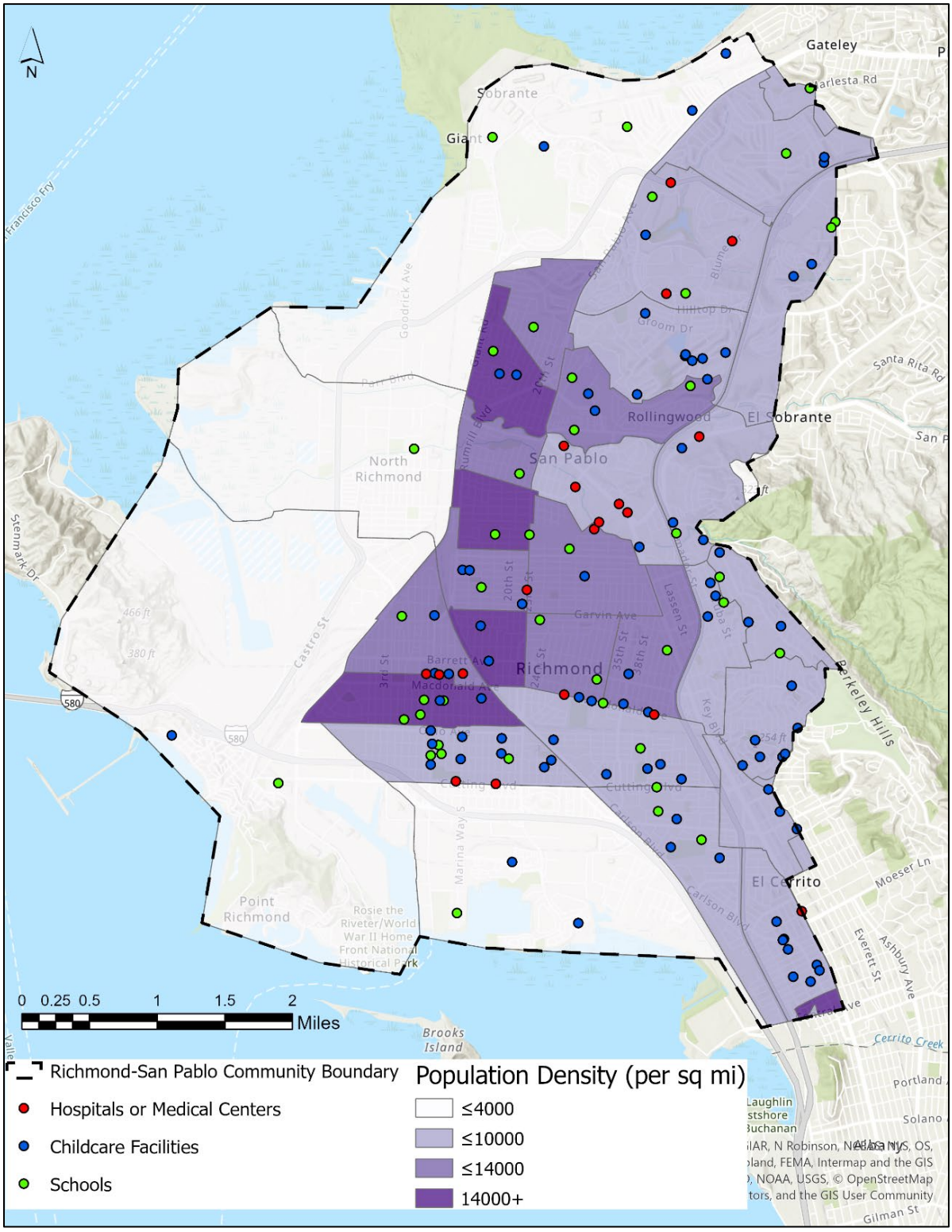
[39] For additional information regarding CARB's Community Air Protection Program and the online Resource Center visit: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program

Figure 10. Land Use Map for the Richmond-San Pablo Community[40]



[40] Data Source: https://www.digmap.com/platform/smartparcels/, https://www.cde.ca.gov/ds/, http://data-cdphdata.opendata.arcgis.com/, and https://ww3.arb.ca.gov/research/apr/past/11-336.pdf

Figure 11. Population Density and Sensitive Receptor for the Richmond-San Pablo Community[41]



[41] Data Source: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

b. Arvin, Lamont Community

i. Staff Recommendation – Community Air Monitoring Plan and Community Emissions Reduction Program

The San Joaquin Valley AB 617 Environmental Justice Collaborative Steering Committee[42] nominated this community as one of the top ranked communities in 2018 and the top rural community in 2019. In September 2019, the SJVAPCD recommended the Arvin, Lamont community contingent on State resources. In September 2020, the SJVAPCD again recommended the Arvin, Lamont community to their Board and to CARB in October 2020. The Arvin, Lamont Community is a high priority for community members, the City of Arvin, local officials and community-based organizations. CARB staff is therefore recommending the Arvin, Lamont Community for development of a community air monitoring system and an emissions reduction program.

The Arvin, Lamont Community is at the southern end of the SJVAPCD in South Kern County. The cities of Arvin and Lamont are small, rural communities. The discrete boundaries of Arvin and Lamont make a single community for purposes of this Program. The community is located at the base of the Tehachapi mountain range, which acts as a trap for air pollution. The Arvin, Lamont Community has a high cumulative exposure burden, a significant number of sensitive receptors, and the census tracts of the entire community have been designated as disadvantaged communities. The community is highly affected by regional and local air pollution sources, which includes large scale agricultural practices, concentrated warehouse distribution centers, and oil and gas farm development.

ii. Community Description

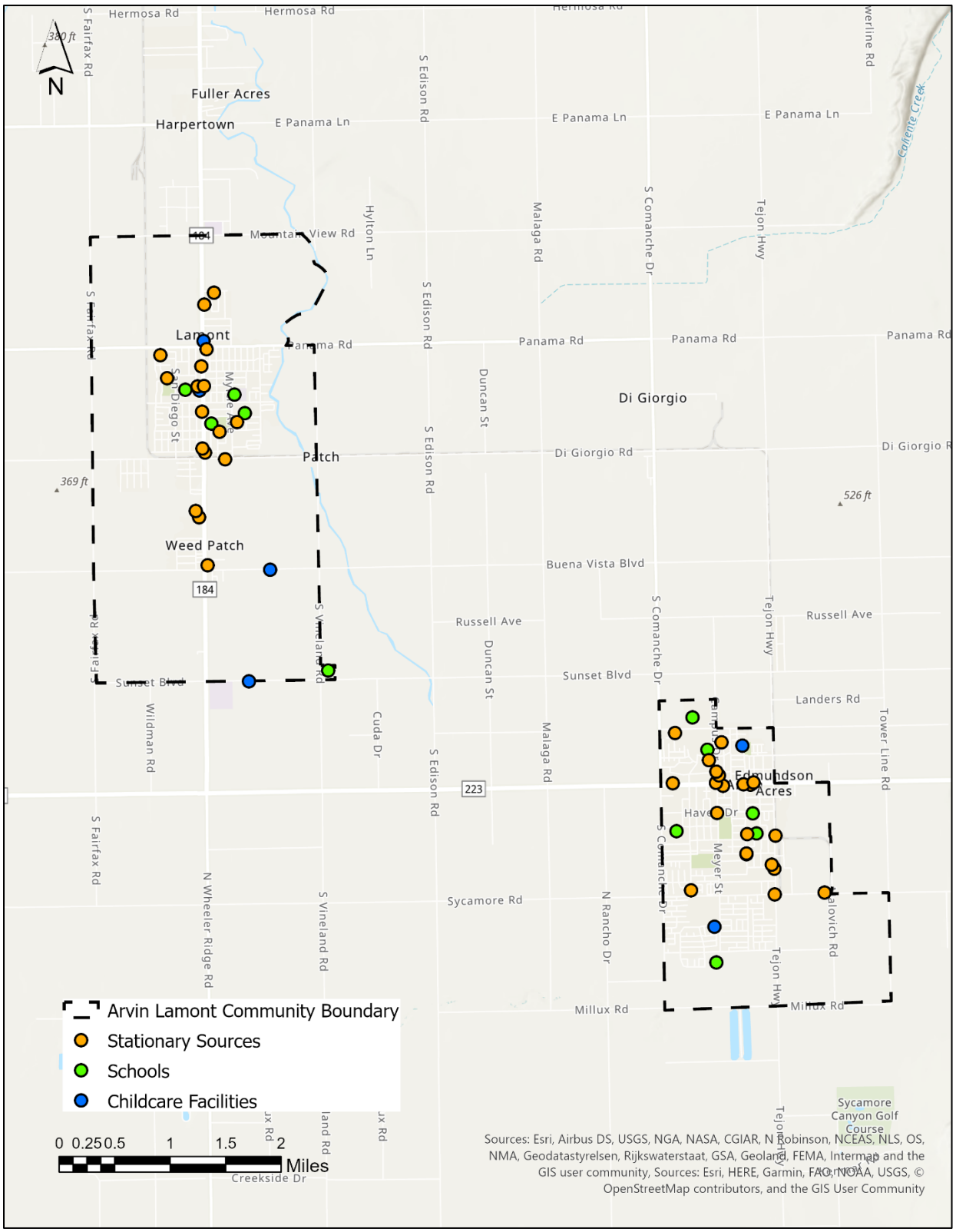
Figure 12 depicts the preliminary Arvin, Lamont Community boundary and highlights schools, daycares, and stationary sources. According to 2018 emissions data reported to CARB by SJVAPCD,[43] there are 38 stationary sources within the Arvin, Lamont Community boundaries. The sensitive receptors include 11 schools,8 licensed daycare facilities, and 1 hospital or medical center.[44]

[42] http://www.calcleanair.org/wp-content/uploads/2019/03/SJV-AB617-EJ-Steering-Committee-First-Round-Community-Nominations-for-2018-2019-6.pdf

[43] Data Source: Based on Air District reported 2018 facility emissions to CARB. Air Districts report criteria and toxics emissions from facilities to CARB's California Emission Inventory Development and Reporting System (CEIDARS). Facilities report GHG emissions to CARB's Greenhouse Gas Mandatory Reporting Regulation. Facility Search Engine: https://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php. Pollution Mapping Tool: https://ww3.arb.ca.gov/ei/tools/pollution_map/

[44] Data Source: https://www.cde.ca.gov/ds/, http://data-cdphdata.opendata.arcgis.com/, https://ww3.arb.ca.gov/research/apr/past/11-336.pdf

Figure 12. Arvin, Lamont Community Details



At the November 6, 2020 CARB workshop, Fuller Acres, located adjacent to the north border of Lamont, was recognized by the attending public as having oil and gas refinery emissions that impact the Arvin Lamont Community. If the CARB Board selects the Arvin Lamont Community, CARB staff recommend that the community steering committee consider the emissions impact of sources in Fuller Acres when determining the final emissions boundary. As noted, the boundaries presented here are preliminary and are expected to be finalized when the community steering committee convenes, if the community is selected by the CARB Board.

Figure 13 provides a photo of the City of Arvin, a small rural disadvantaged community of 4.8 square-miles in the southern-most portion of California's Central Valley with a population of 21,300. Over half the people of Arvin rely on agriculture as their primary source of income. Arvin is at the bottom of the air basin and surrounded by mountains on three sides. Thus, the City of Arvin is heavily affected by regional air pollution from the San Joaquin Valley, as well as air pollution from pesticide, agriculture operations, and oil and gas operations.[45]

Figure 13. Arvin Portion of the Arvin, Lamont Community Photo

[45] San Joaquin Valley's AB 617 Environmental Justice Steering Committee: Second Round Community Nominations, available at http://community.valleyair.org/media/1478/sjv-ej-sc-submittal-stockton-arvin-lamont.pdf, Page 17.

Figure 14 shows Lamont, a rural, disadvantaged, and historical farm-working community of 4.6 square-miles located north of the City of Arvin. Most of Lamont's 15,120 residents are employed by major agricultural companies in the region.[46] Lamont is surrounded on all sides by agricultural lands. Pesticide use from these agriculture operations have a major impact on Lamont air quality. Lamont is also directly downwind from one of the largest oil and gas refineries in Kern County. Lamont residents suffer from some of the worst PM2.5 levels in the nation.[47]

Figure 14. Lamont portion of the Arvin, Lamont Community Photo[48]

Combined, the Arvin Lamont community is approximately 9.5 square-miles and have an estimated population of 36,420. This community is considered disadvantaged per SB 535 [49] and low-income per AB 1550.[50] Key CES 3.0 indicators are listed in Table 4 below. The overall CES score for the Arvin, Lamont Community is at the 96th percentile, which meant higher pollution burden is placed on the people living in the community than 95 percent of the 8,000 census tract in California.

[46] U.S. Census Bureau Quick facts: Lamont CDP, California. Available at https://www.census.gov/quickfacts/fact/table/lamontcdpcalifornia

[47] San Joaquin Valley's AB 617 Environmental Justice Steering Committee: Second Round Community Nominations, available at http://community.valleyair.org/media/1478/sjv-ej-sc-submittal-stockton-arvin-lamont.pdf, Page 16.

[48] Image source: Google Earth

[49] Disadvantaged community designations per Senate Bill (SB) 535 (De León, Chapter 830, Statutes of 2012)

[50] Low-income definitions per Assembly Bill (AB) 1550 (Gomez, Chapter 369, Statutes of 2016)

Table 4. Key CalEnviroScreen 3.0 Indicators for Arvin, Lamont [51,52]

Overall Score	PM2.5	DPM	Asthma	Cardiovascular Disease	Poverty	Unemployment	CA Healthy Places Index
96	100	21	83	96	99	95	99

iii. Community Engagement

The nomination of Arvin, Lamont has received broad support. Local environmental justice groups, including but not limited to, the San Joaquin Valley AB 617 Environmental Justice Collaborative Steering Committee, the San Joaquin Clean Energy Organization, the Committee for a Better Arvin, the Central California Asthma Collaborative, the Central California Environmental Justice Network, and the Mayor of Arvin have all voiced their support for the nomination.[53]

There are several community-led environmental actions underway in the Arvin, Lamont Community. Several community groups in the San Joaquin Valley, including those operating in Kern County have received grants to enhance community engagement in the Arvin and Lamont areas on environmental justice issues.[54] The Center on Race, Poverty & the Environment (CRPE), Kern County, was tasked to develop a training program for residents in the low-income farmworker communities of Arvin, Lamont, Greenfield, Delano, Lost Hills, and Shafter in Kern County. Resident volunteers have led grassroots environmental justice projects for at least a decade.[55]

CARB Community Air Grants Awardees

The community based organizations below received Community Air Grants in either 2018 or 2019 to implement their AB 617 proposed project through March 2021 or 2022.

The following grant was awarded in 2018:

- Central California Asthma Collaborative was awarded $499,993 for their project to increase awareness of impacts of air pollution and ways to avoid negative health consequences, facilitate greater capacity to engage in air quality policy processes, and supply technical information to improve local air quality.

[51] Data Source: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. More information on California Healthy Places Index available at: https://healthyplacesindex.org/

[52] The CES 3.0 Score and CA Healthy Places Index are the highest overall percentiles of a census tract found within both boundaries.

[53] SJVAPCD Community Identification and Prioritization. http://community.valleyair.org/community-identification

[54] https://calepa.ca.gov/envjustice/funding/smallgrants/2019-environmental-justice-small-grants-project-summaries/

[55] https://ccejn.org/2018/09/23/victory-in-arvin/, https://www.shfcenter.org/sjvhealthfund/partners-ccejn

The following grants were awarded in 2019:

- Central California Asthma Collaborative was awarded $298,896 for their Community Air Grant II Project. This project will serve the San Joaquin Valley (SJV) area (8 counties). The project includes the continued operation, data collection, and real-time display of calibrated data from low-cost particulate matter air monitors installed in communities across the SJV. This project will also expand the capacity of the SJV Community Air Monitoring Network and the associated outreach in SJV communities

- Social and Environmental Entrepreneurs - Central California Environmental Justice Network was awarded $300,000 for their Collaboration for Clean Air in the San Joaquin Valley Project. This project will serve communities in Kern, Tulare, Kings, Fresno, and San Joaquin Counties. The project will build capacity for AB 617 communities in the San Joaquin Valley (SJV), continue to support Year 1 communities in the SJV during implementation phase, and conduct volatile organic compound, particulate matter, and pesticide sampling.

iv. Air Quality Burden Assessment

The discussion presented here summarizes the air quality burden in and around the Arvin, Lamont Community and highlights the current air quality issues the community is experiencing supporting CARB staff's rationale for recommending this community be selected in 2020.

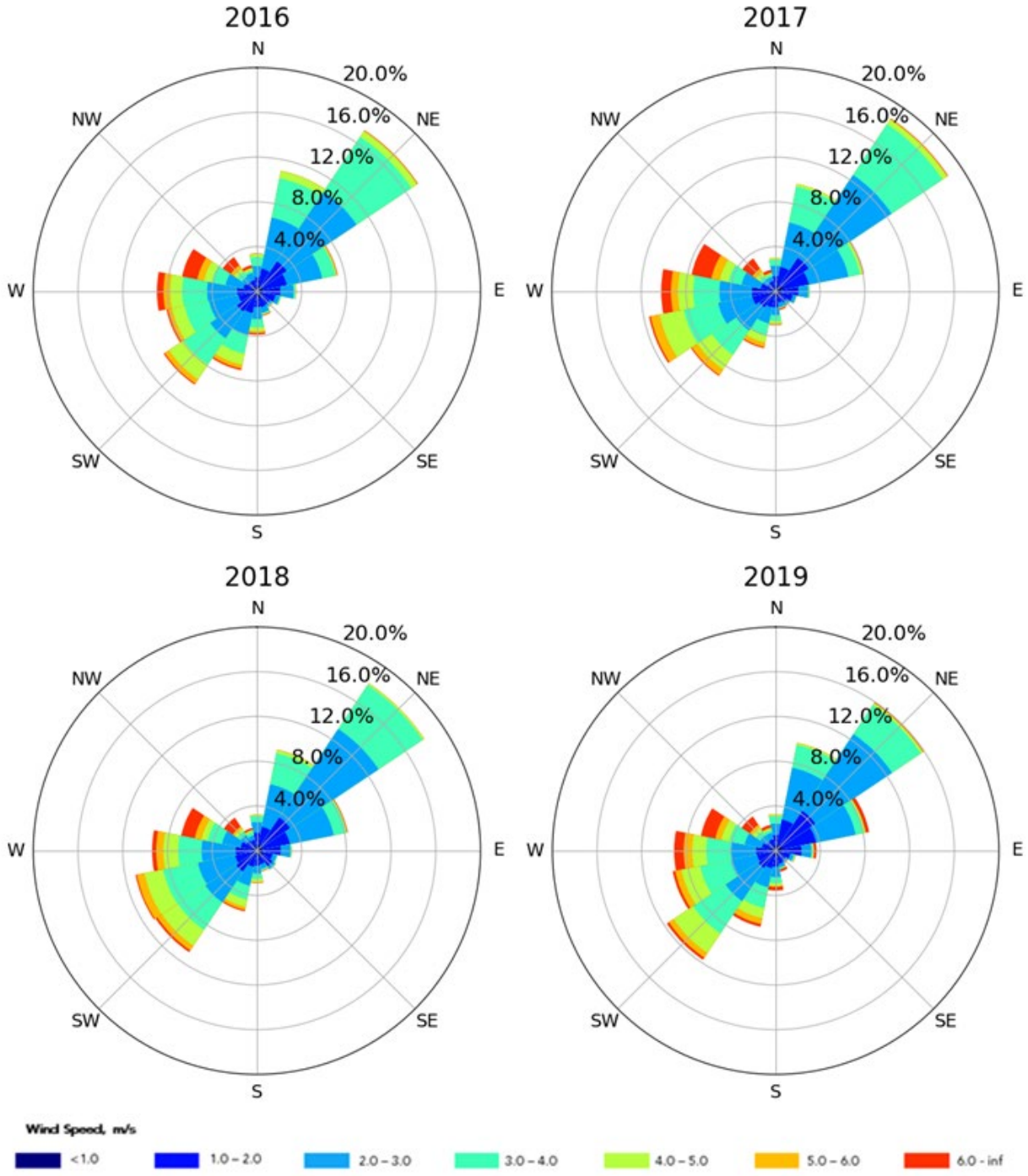
a. Ambient Air Quality Data

The Arvin-Di Giorgio site[56] is a regulatory air quality monitoring station about 6-miles east of the Lamont boundary and about 3-miles northeast of the Arvin boundary (Figure C-2 in Appendix C). The existing monitoring station does not measure PM2.5 or air toxics and therefore preliminary air quality analysis is not included in this report. The wind rose[57] in Figure 15 shows during 2016 – 2019, northeasterly winds are most common at the community while the fastest winds are most commonly from the west. Sources to the northeast and southwest of the community will likely have the largest impact on community air quality.

[56] Air Monitoring Site Information for Stockton-Hazelton: https://ww3.arb.ca.gov/qaweb/site.php?s_arb_code=15249.

[57] For a description on how to read a wind or pollutant rose see Appendix D in this document.

Figure 15. Wind Roses from Arvin-Di Giorgio (ARB: 15249) [58]



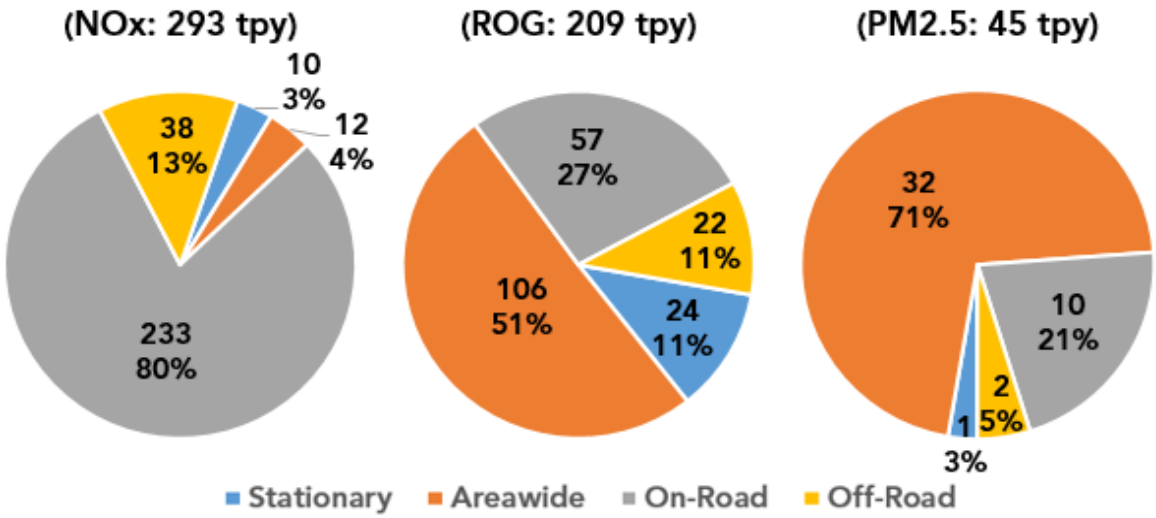
[58] Data Source: https://www.epa.gov/outdoor-air-quality-data

b. Preliminary Emissions Inventory Estimates

A preliminary emissions inventory based on the proposed community boundary was developed by CARB staff to quantify emissions of mobile, stationary and area wide sources in the community. Details on the methodology are provided in Appendix E in this document. Figure 16 summarizes the draft estimated emissions of key air pollutants, such as NOx, ROG, and PM2.5 for this community.

Figure 16. Preliminary Source Contributions in the Arvin, Lamont Community

(2019 Preliminary Emissions in Tons per Year, tpy)



The activities that contribute to these emissions are listed in Table 5 and are detailed in Table E.b.2 in Appendix E along with an initial estimation and spatial distribution based on a preliminary planning emissions inventory.

Table 5. Top Source Categories by Stationary, Area, and Mobile for the Arvin, Lamont Community

(Preliminary Emissions inventory for 2019) [59]

Stationary Sources			
PM2.5	**Percent**	**ROG**	**Percent**
Wood and Paper	34.1%	Petroleum Marketing	32.7%
Food and Agricultural Processing	26.2%	Coatings and Related Process Solvents	27.2%
Service and Commercial	25.1%	Degreasing	16.6%
Petroleum Marketing	12.3%	Oil and Gas Production	7.0%
Coatings and Related Process Solvents	1.3%	Adhesives and Sealants	5.7%
Area Sources			
PM2.5	**Percent**	**ROG**	**Percent**
Cooking	39.4%	Consumer Products	42.3%
Farming Operations	19.4%	Architectural Coatings and Related Process Solvents	25.3%
Paved Road Dust	17.5%	Farming Operations	17.2%
Residential Fuel Combustion	8.1%	Pesticides/Fertilizers	10.8%
Fugitive Windblown Dust	7.1%	Residential Fuel Combustion	2.4%
Mobile Sources[60]			
PM2.5	**Percent**	**ROG**	**Percent**
Heavy Heavy Duty Vehicles	29.5%	Light Duty Vehicles	50.1%
Light Duty Vehicles	29.0%	Off-Road Equipment	11.8%
Farm Equipment	10.5%	Medium Duty Vehicles	11.7%
Medium Heavy Duty Vehicles	9.5%	Heavy Heavy Duty Vehicles	8.2%
Off-Road Equipment	7.8%	Light Heavy Duty Vehicles	4.1%

Additionally, Figure 17 presents the emission trends for NOx, PM2.5 and ROG in the San Joaquin Valley Air Basin from 2012 through 2030 using projected emissions from the latest SIP emissions inventory.[61] The forecasted emissions provide an initial assessment of future emission trends and air quality benefits in the air basin, reflecting the effects of regional growth assumptions and adopted CARB and District rules as received by March 2020, and provides an indication of the emissions trends that will be seen in the community as a result of existing emission reduction programs. A community-scale forecasted inventory will be developed to evaluate the air quality benefits of adopted rules and ongoing and potential future rulemaking activities if the Arvin, Lamont is selected as a 2020 community.

[59] See Appendix E in this document for methodology and additional information on the emissions inventory. For more details on source categories and associated activities (emission inventory codes), see documentation at https://ww3.arb.ca.gov/ei/documentation.htm.

[60] Explanation of vehicle categories: https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf

[61] Based on the latest SIP inventory with a 2017 base year (CEPAM 2019SIP v1.01).

Figure 17. Projected Emission Trends for Major Source Categories in the San Joaquin Valley Air Basin (Emission in Tons per Day)

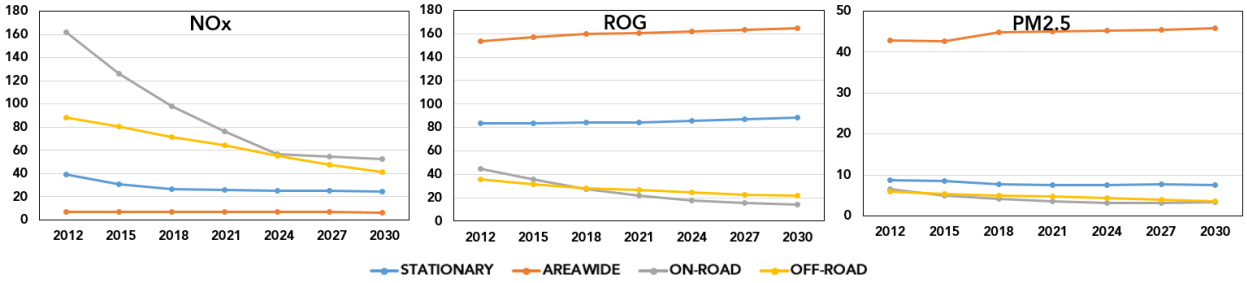
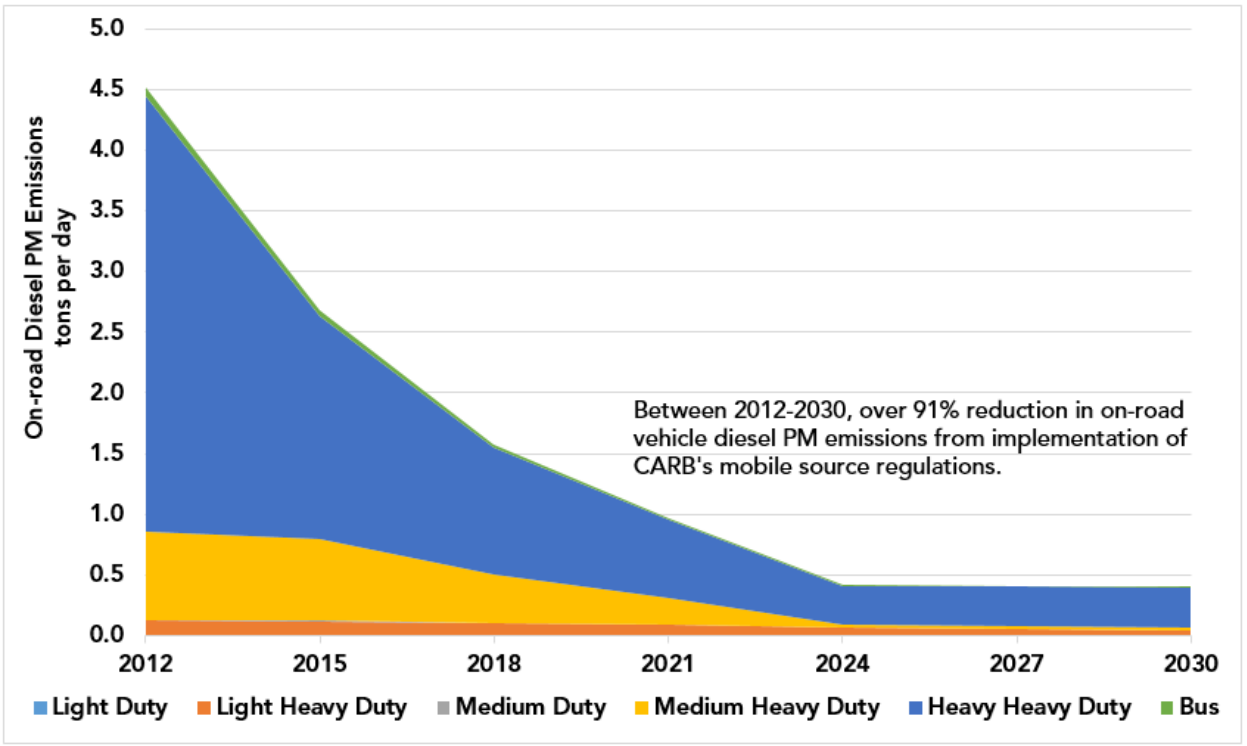


Figure 18 shows the trend of diesel PM emissions from on-road vehicles in the Air Basin – the emissions are projected to decrease significantly in future years from implementation of adopted mobile source regulations, including the CARB Truck and Bus Regulation.[62]

Figure 18. Projected Emission Trends for On-road Vehicles Diesel PM in San Joaquin Valley Air Basin (Emission in Tons per Day) [62]

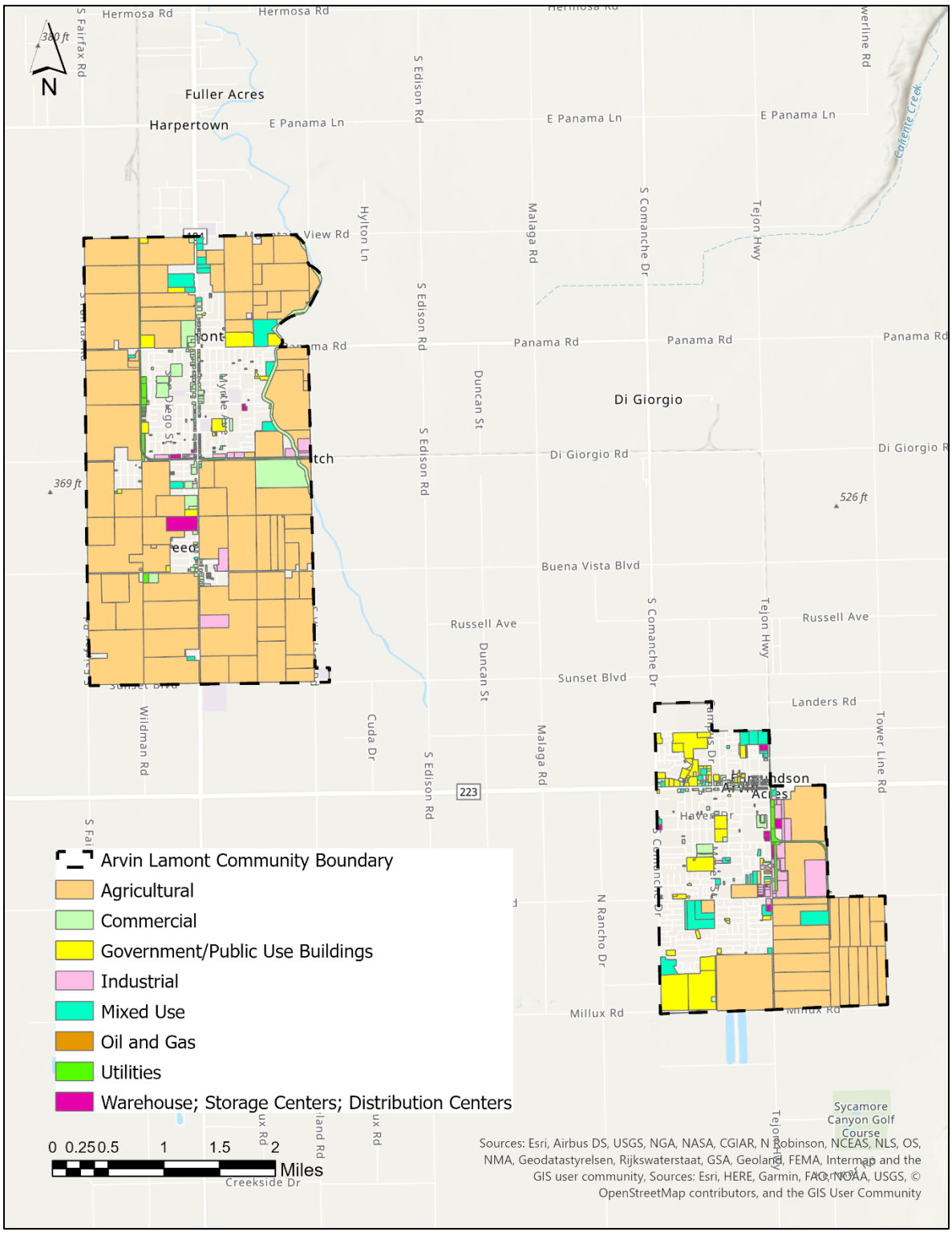


[62] More information on the Truck and Bus Regulation available at: https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation

c. Proximity-Based Exposure

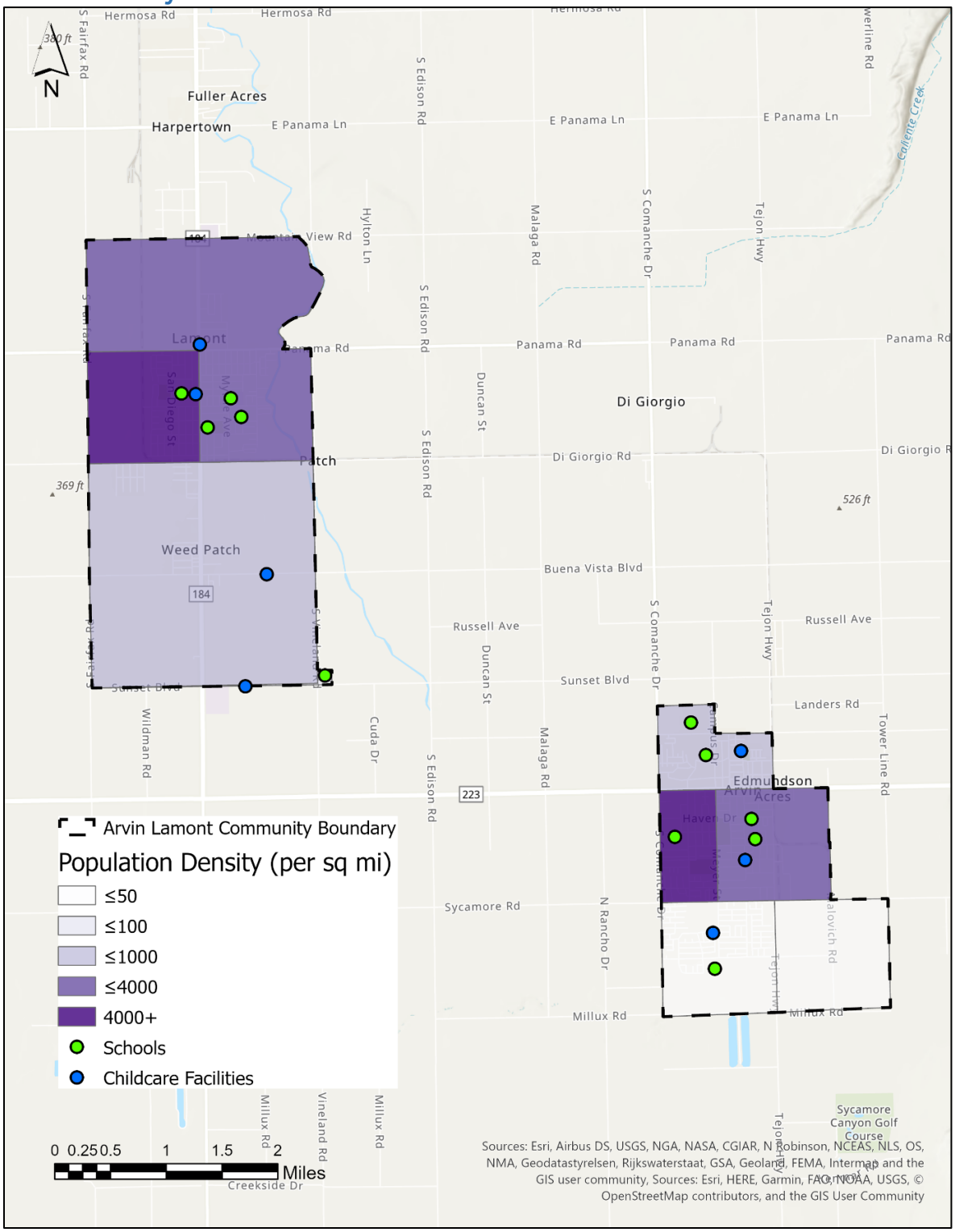
The Arvin, Lamont Community covers 7,867 acres of land across the two cities. As shown in Figure 19, most of the land use within the community is zoned for agricultural use, which is about 3,976 acres or 51 percent of the land use. Within the community, about 22 percent of the land use is for residential, 3 percent is for commercial use, and 2 percent is for industrial use. Categories of industrial land use within the community boundary can be seen in the map in Figure 19. The largest industrial land use is associated with food processing (44 acres), followed by vacant industrial land (32 acres), light manufacturing (20 acres), and production plants and packing shed (18 acres). There are a significant number of warehouses and storage centers within the community. Some of these warehouses and storage centers are located within short distance from residential regions and sensitive receptors. Agricultural land also surrounds the community, as shown in Figure 20. Residents in both cities are surrounded by agricultural land use as seen in Figure 21.

Figure 19. Land Use Map for the Arvin, Lamont Community[63]



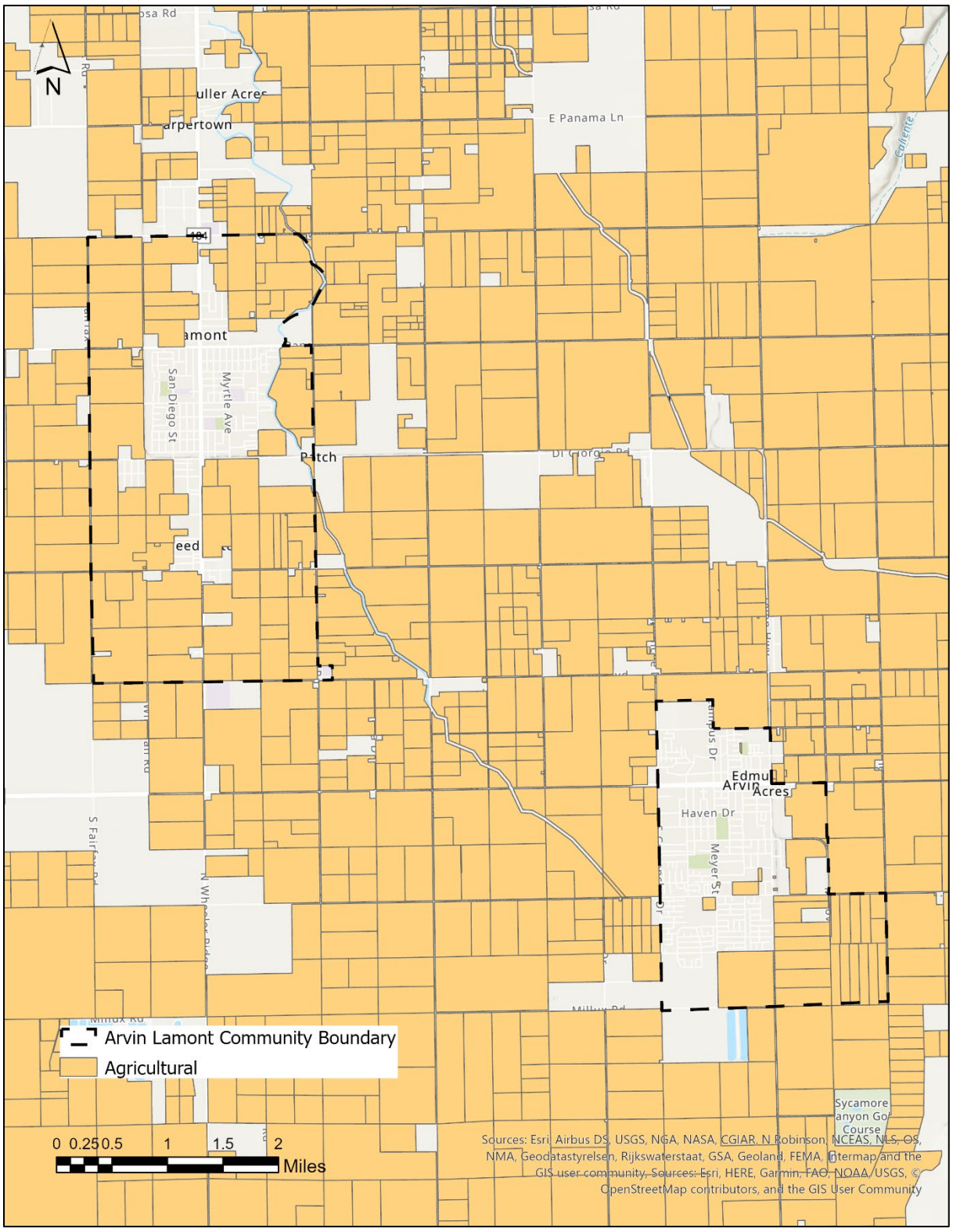
[63] Data Source: https://www.digmap.com/7platform/smartparcels/, https://www.cde.ca.gov/ds/, http://data-cdphdata.opendata.arcgis.com/, and https://ww3.arb.ca.gov/research/apr/past/11-336.pdf

Figure 20. Population Density and Sensitive Receptor for the Arvin, Lamont Community [64]



[64] Data Source: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

Figure 21. Agricultural Land use surrounding the Arvin, Lamont Community.[65]



[65] Data Source: https://www.digmap.com/7platform/smartparcels/

c. South Los Angeles Community

i. Staff Recommendation – Community Air Monitoring Plan and Community Emissions Reduction Program

In October 2020, the SCAQMD Board approved recommending South Los Angeles to CARB as an AB 617 community. At the SCAQMD board meeting, SCAQMD staff stated they intend to work with the Legislature to seek $4 - $6 million annually for at least six years to support the AB 617 implementation in this community. CARB staff supports the air district's position and recommends selection of South Los Angeles Community for development and implementation of a community air monitoring plan and community emissions reduction program.

The South Los Angeles Community is located in the SCAQMD, south of downtown Los Angeles and includes the neighborhoods of Hyde Park, Jefferson Park, University Park, Exposition Park, and historic South Central, Vermont and Florence. The community has a high cumulative exposure burden, ranks in the 90th percentile in CalEnvirosScreen 3.0 and in the 80th percentile in SCAQMD's Multiple Air Toxics Exposure Study IV (MATES IV).[66] Additionally, the community includes a significant number of sensitive receptors and census tracts which have been designated as disadvantaged communities. Sources impacting the community include auto body shops, dry cleaners, manufacturing facilities, warehousing and distribution centers, oil and gas drill sites, and chemical plant sites.

ii. Community Description

The South Los Angeles Community has an area of approximately 23 square-miles. The community, as shown in Figure 22, is adjacent to two existing AB 617 communities previously selected for Community Emissions Reduction Programs and Community Air Monitorings: East Los Angeles, Boyle Heights, West Commerce and Wilmington, West Carson, Long Beach. The purple shaded area that surrounds the preliminary community boundary was approved by the SCAQMD Board as potential area to be considered for the community for plan development purposes. However, solely for purposes of developing an initial analysis, it was necessary for CARB staff to establish a defined boundary. CARB staff used the preliminary boundary indicated in Figure 22 (based on information provided by SCAQMD) within the purple shaded to develop the preliminary emissions inventory analysis in this section. There are approximately 396,300 people living within the community boundary.[67] The vast majority of the population are of minority groups, 65 percent of the community is Hispanic and 29 percent are African American.

[66] MATES IV and ongoing MATES V will provide data to understand and mitigate the high cumulative exposure burdens from the community's multiple toxic air pollution sources.
[67] Data Source: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30.

Figure 22. South Los Angeles Community[68]

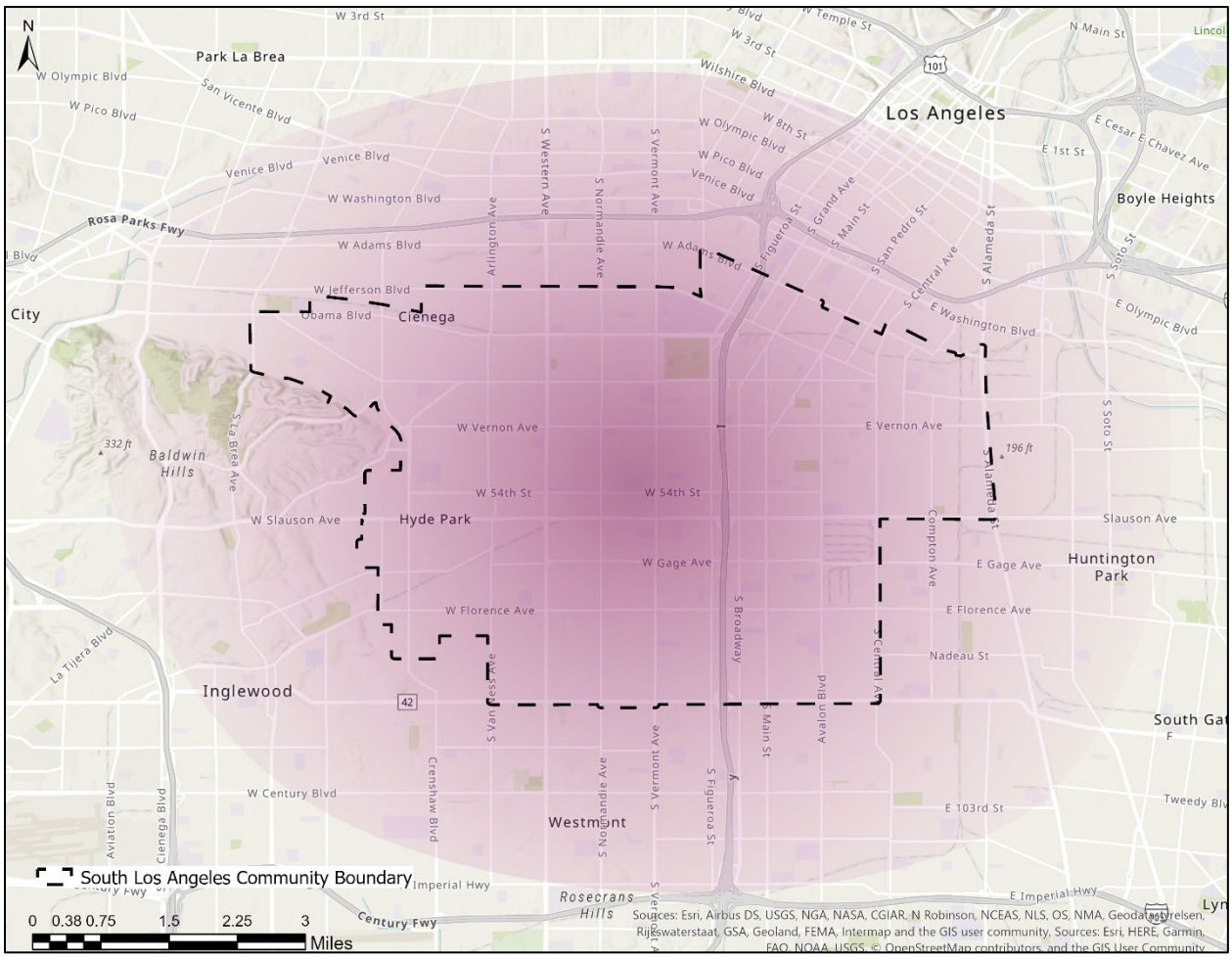


Figure 23 depicts the community analysis boundary and highlights schools, hospitals, daycares, and stationary sources within the boundary. According to 2018 emissions data reported to CARB by SCAQMD,[69] there are 116 stationary sources within the community, one of which is a Cap-and-Trade facility.[70] The sensitive receptors in the

[68] If community is selected the final community boundary will be determined as part of the community engagement process, preliminary assessment based on border depicted in map.

[69] Data Source: Based on Air District reported 2018 facility emissions to CARB. Air Districts report criteria and toxics emissions from facilities to CARB's California Emission Inventory Development and Reporting System (CEIDARS). Facilities report GHG emissions to CARB's Greenhouse Gas Mandatory Reporting Regulation. Facility Search Engine: https://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php. Pollution Mapping Tool: https://ww3.arb.ca.gov/ei/tools/pollution_map/

[70] Cap-and-trade is a regulatory approach used to control pollution by setting a firm cap on allowed emissions while employing market mechanisms to achieve emissions reductions while driving costs down. In a cap-and-trade program, a limit, or cap is put on the amount of greenhouse gases that can be emitted.

community include 6 hospitals or medical centers, 157 schools, and 218 licensed daycare facilities.[71]

Figure 23. South Los Angeles Community Details[72]

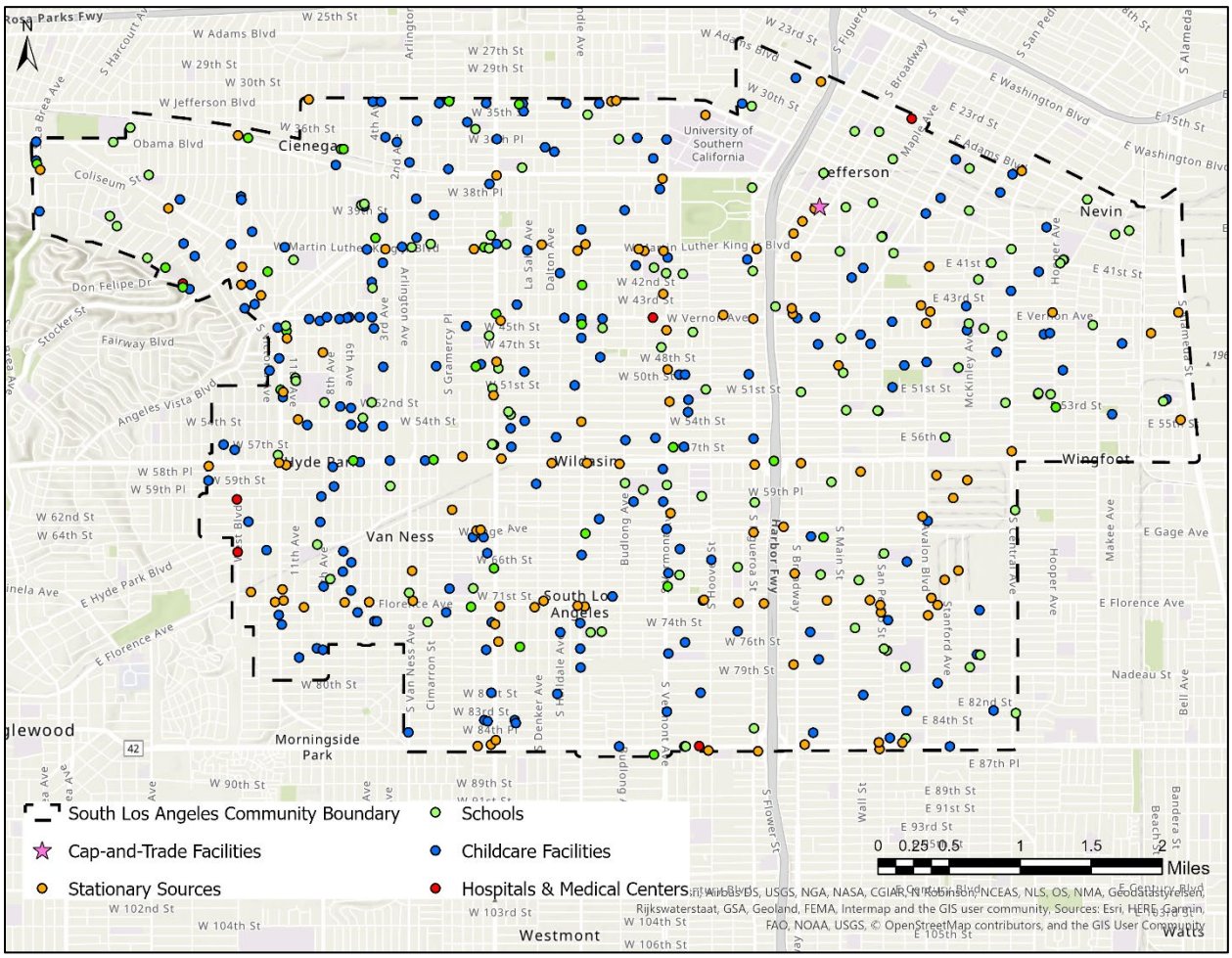


Figure 24 shows a photo of typical sources in neighborhoods within the South Los Angeles Community. The community is heavily impacted by emissions from various industry operations and major freeways, mainly the Harbor Freeway. There are 117 gas stations, 55 auto body shops, 92 metal manufacturing facilities, 51 dry cleaners, and 4 oil drilling sites.[73] There are also three Title V facilities (major sources subject to the Clean Air Act) and six facilities that regularly process hexavalent chromium, lead, and/or arsenic in this area.

[71] Data Source: https://www.cde.ca.gov/ds/, http://data-cdphdata.opendata.arcgis.com/, https://ww3.arb.ca.gov/research/apr/past/11-336.pdf

[72] If selected, final community boundary will be determined as part of the community engagement process, the boundaries indicated was for a preliminary analysis purposed only.

[73] SCAQMD Facility Information Detail (F.I.N.D.) https://xappprod.aqmd.gov/find

Figure 24. South Los Angeles Community Photo[74]

The key CES 3.0 indicators are listed in Table 6. The overall CES score for the South Los Angeles community is at the 100th percentile, which meant higher pollution burden is placed on the people living in the community than 99 percent of the 8,000 census tract in California. This community suffers from some of the highest levels of poverty and unemployment in relation to the rest of the state, which were at the 100th and 99th percentile, respectively. The people living in this community also have some of the worst asthma and cardiovascular disease rates in the state, which were at the 98th and 94th percentile, respectively.

[74] Image source: Google Earth

Table 6. Key CalEnviroScreen 3.0 Indicators for the South Los Angeles Community[75]

Overall Score	PM2.5	DPM	Asthma	Cardiovascular Disease	Poverty	Unemployment	CA Healthy Places Index
100	93	95	98	94	100	99	99

iii. Community Engagement

The nomination of South Los Angeles has received broad support. As part of their public solicitation process this year, SCAQMD received over a hundred nominations for the South Los Angeles Community. This community was nominated by numerous groups and entities including from local environmental justice groups, the City of Los Angeles, Office of Petroleum and Natural Gas Administration, Strategic Concepts in Organizing and Policy Education: SCOPE, the Physicians for Social Responsibility-Los Angeles (PSR-LA), and elected officials.[76]

CARB Community Air Grants Awardees

The Community Air Grants fund projects directly related to AB 617. The community based groups below received a Community Air Grant in 2018 or 2019 for a project within this community to implement their proposed project through March 2022.

- Physicians for Social Responsibility-Los Angeles (PSR-LA) South Central LA Project to Understand the Sources of air Pollution and Health impacts (SCLA-PUSH) was awarded for the SCLA-PUSH Moving Towards Meaningful Solutions project. This project strengthens community residents' technical capacity to develop solutions leading to tangible improvements in air quality while minimizing frontline communities' cumulative vulnerabilities while bolstering small business through the implementation of clean and green production strategies. This project provides community education and technical training on emission reduction solutions, develops a set of tools to assess the viability of Best Available Control Technologies to reduce air pollution, and designs a Community Regeneration Plan through community visioning and planning that seeks to accomplish the group's collective vision of transforming the state of the air in South Central Los Angeles. This plan focuses on three stationary sources of air pollution: auto body shops, dry cleaners, and metal manufacturing facilities. Through a community visioning and planning process, SCLA-PUSH project members and residents work together to produce a

[75] Data Source: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. More information on California Healthy Places Index available at: https://healthyplacesindex.org/

[76] https://www.aqmd.gov/nav/about/initiatives/community-efforts/environmental-justice/ab617-134/community-identification-prioritization

roadmap for achieving the transformation of South Central LA's air, primarily through creative technology solutions and innovation rooted in a Just Transition framework

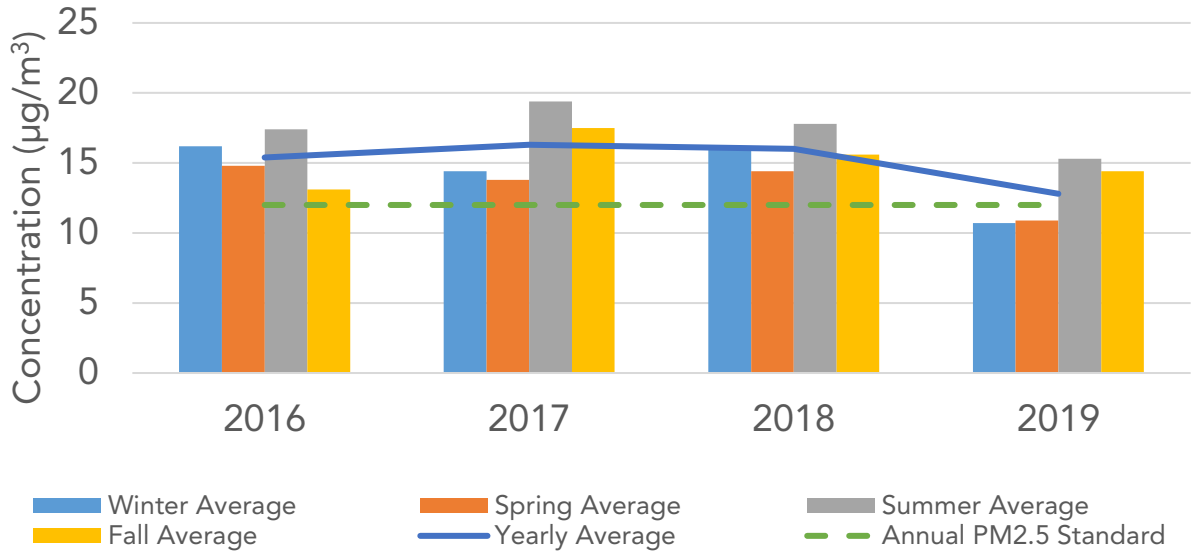
iv. Air Quality Burden Assessment

The discussion presented here summarizes the air quality burden in and around the South Los Angeles Community and highlights the current air quality issues the community is experiencing, supporting CARB staff's rationale for recommending this community to be selected in 2020.

a. Ambient Air Quality Data

There are no regulatory air monitoring stations within the South Los Angeles community boundary. Compton, LAX, and North Main Street[77] are the nearest regulatory air quality monitoring stations to the community and are all about 5-miles away. North Main Street is the only one of the three stations that is predominantly downwind of the South Los Angeles community (Figure C-3 in Appendix C in this document) which provided the information shown in this section. The average concentration of PM2.5 at Los Angeles-North Main Street shown in Figure 25 were highest in summer months (June to August). The yearly average concentration of PM2.5 were consistently above the federal Clean Air Act standards of 12 µg/m^3.

Figure 25. Average PM2.5 Concentrations for Los Angeles-North Main Street (ARB: 70087) [78]

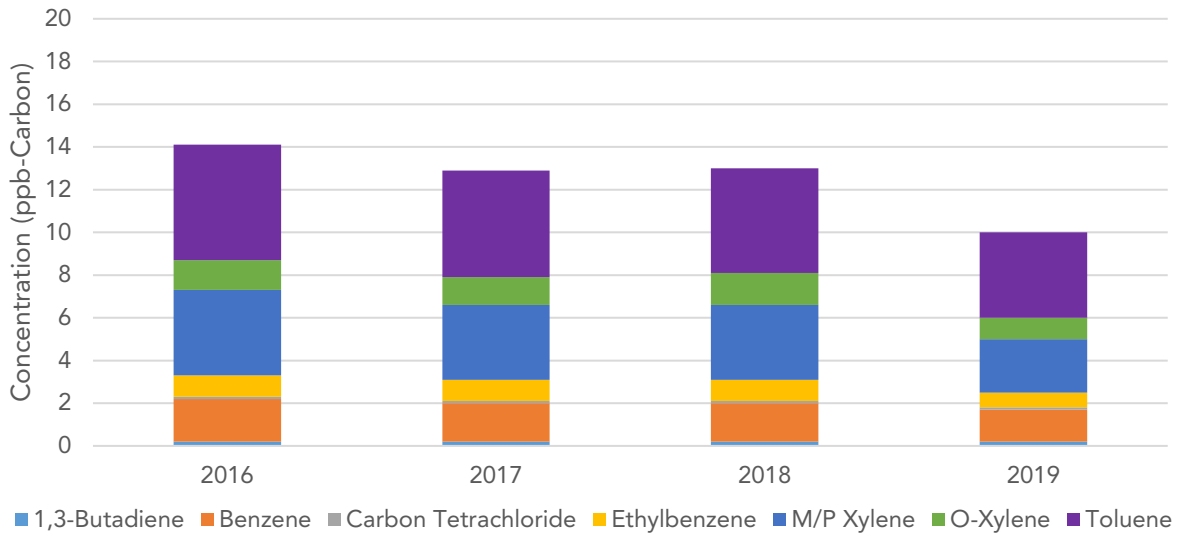


[77] Air Monitoring Site Information for Los Angeles-LAX: https://ww3.arb.ca.gov/qaweb/site.php?s_arb_code=70111. Compton: https://ww3.arb.ca.gov/qaweb/site.php?s_arb_code=70112. Los Angeles-North Main Street: https://ww3.arb.ca.gov/qaweb/site.php?s_arb_code=70087

[78] Data Source: https://www.epa.gov/outdoor-air-quality-data

Figure 26 shows the 2016 and 2019 yearly concentration of volatile organic compounds (VOCs) including 1,3-butadiene, benzene, carbon tetrachloride, ethylbenzene, m/p – xylene, o – xylene, and toluene. People exposed to these VOCs species at elevated concentrations and for a prolonged period have an increased chance of suffering from carcinogenic and non-carcinogenic health issues.[79] Exposure to these species at acute or chronic Reference Exposure Levels (REL) can damage the alimentary, hematologic, reproductive, and respiratory systems.[80] None of the seven VOCs species exceeded their chronic REL threshold, which are 3.6 ppb-C for 1,3-butadiene, 5.6 ppb-C for benzene, 6.4 ppb-C for carbon tetrachloride, 3,686 ppb-C for ethylbenzene, 1,290 ppb-C for the xylenes, and 780 ppb-C for toluene.[80] The annual average concentration of these seven VOCs species show an overall decreasing trend from 2016 to 2019.

Figure 26. Average VOCS Concentrations for Los Angeles-North Main Street (ARB: 70087) [81]



The pollution rose[82] in Figure 27 shows higher prevalence of low speed winds from the southwest and from the northeast of the monitoring station. The pollution rose of 2016 does not show the dominant southeast winds shown in other years due to missing data between April and June of that year. The highest concentrations of PM2.5 were measured when the winds were blowing from the northeast. The highest concentrations of PM2.5 were measured when the winds were blowing from the

[79] Information on hazardous Air Pollutants available at https://www.epa.gov/haps and https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications

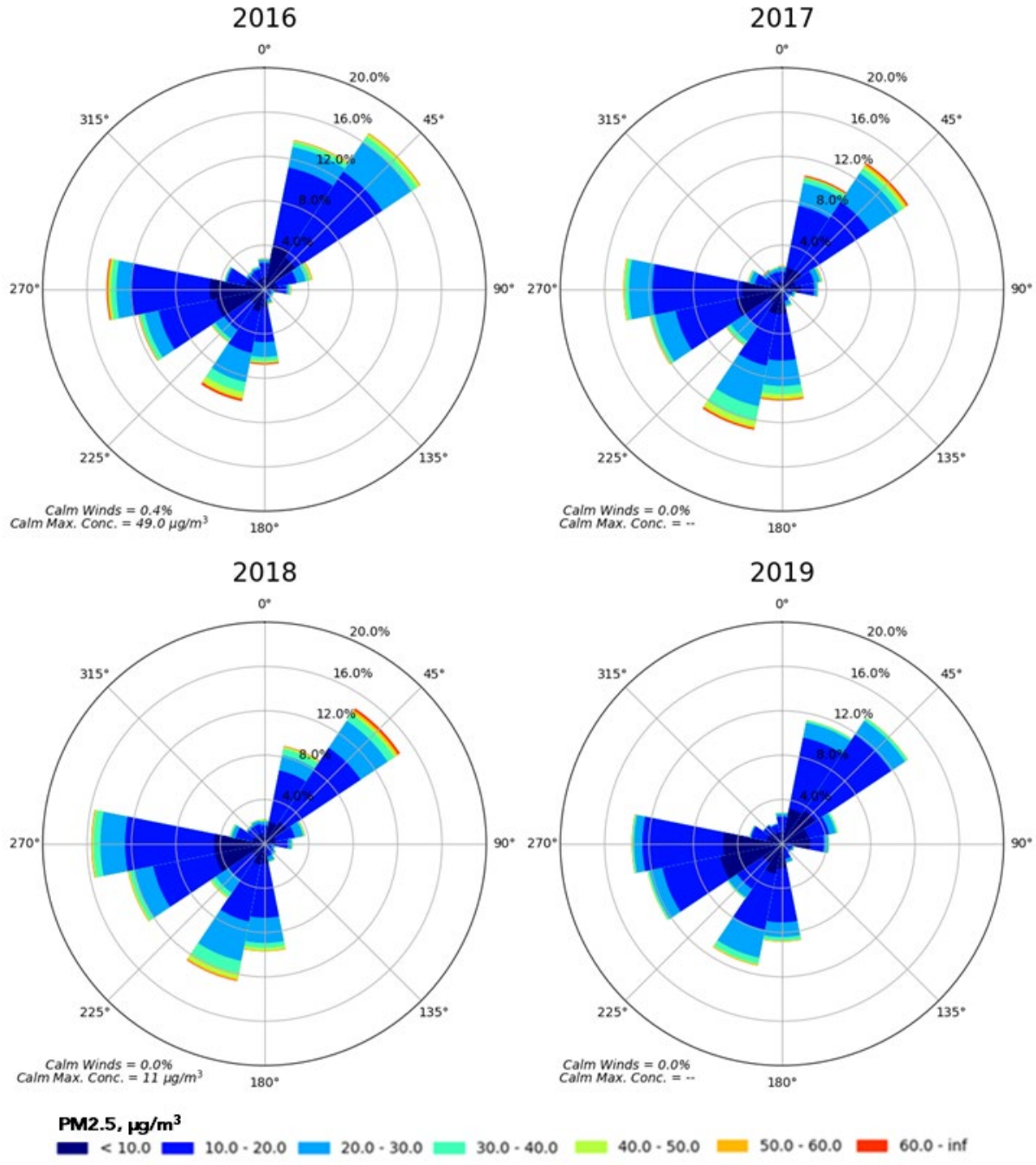
[80] OEHHA Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary: https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary

[81] Data Source: https://www.epa.gov/outdoor-air-quality-data. Measurements under method detection limit (MDL) are replaced with ½ MDL. Missing measurements were listed as null.

[82] For a description on how to read a wind or pollutant rose see Appendix D in this document.

downtown Los Angeles area in northeast. Thus, emission sources in the west and southwest of the community and from downtown Los Angeles may have the greatest impact on community air quality.

Figure 27. Pollution Roses from Los Angeles - North Main Street (ARB: 70087) [83]



[83] Data Source: https://www.epa.gov/outdoor-air-quality-data. Wind speed and direction measurements were not available in April, May, and June of 2016.

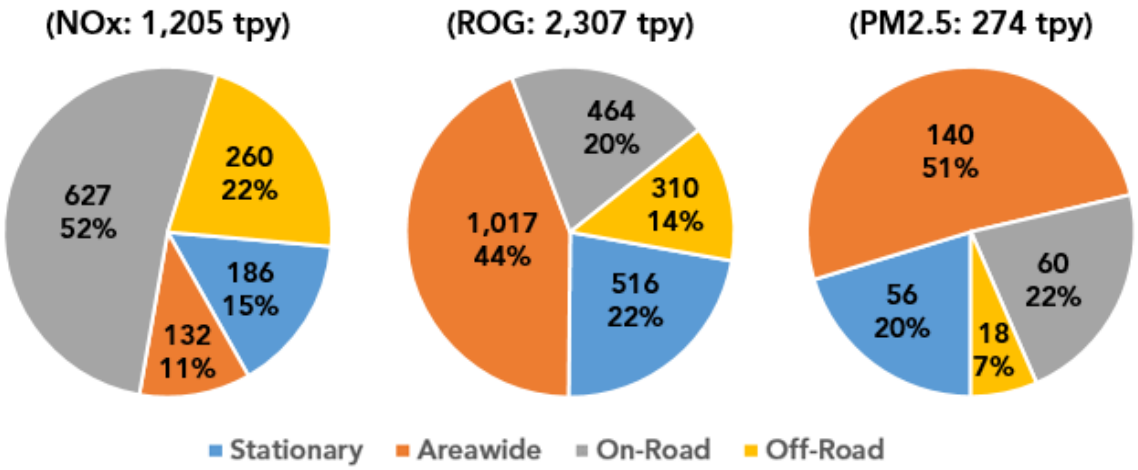
The derived PM2.5 impacts on areas within and surrounding the South Los Angeles Community are available in Appendix F.

b. Preliminary Emissions Inventory Estimates

A preliminary emissions inventory based on the proposed community boundary was developed by CARB staff to quantify emissions of mobile, stationary and area wide sources in the community. Details on the methodology are provided in Appendix E in this document. Figure 28 summarizes the draft estimated emissions of key air pollutants, such as NOx, ROG, and PM2.5 for this community.

Figure 28. Preliminary Source Contributions in the South Los Angeles Community

(2019 Preliminary Emissions in Tons per Year, tpy)



The activities that contribute to these emissions are listed in Table 7 and are detailed in Table E.b.3 in Appendix E along with an initial estimation and spatial distribution based on a preliminary planning emissions inventory.

Table 7. Top Source Categories by Stationary, Area, and Mobile for South Los Angeles Community

(Preliminary Emissions inventory for 2017) [84]

Stationary Sources			
PM2.5	**Percent**	**ROG**	**Percent**
Wood and Paper	54.7%	Coatings and Related Process Solvents	24.4%
Manufacturing and Industrial	14.8%	Degreasing	21.8%
Coatings and Related Process Solvents	12.5%	Petroleum Marketing	12.5%
Service and Commercial	11.6%	Other (Waste Disposal)	11.5%
Other (Industrial Processes)	4.0%	Manufacturing and Industrial	8.2%
Area Sources			
PM2.5	**Percent**	**ROG**	**Percent**
Cooking	49.3%	Consumer Products	82.8%
Residential Fuel Combustion	27.8%	Architectural Coatings And Related Process Solvents	11.2%
Paved Road Dust	16.0%	Residential Fuel Combustion	4.5%
Construction And Demolition	5.0%	Pesticides/Fertilizers	0.6%
Fires	1.8%	Cooking	0.6%
Mobile Sources[85]			
PM2.5	**Percent**	**ROG**	**Percent**
Light Duty Vehicles	56.9%	Light Duty Vehicles	44.4%
Off-Road Equipment	22.2%	Off-Road Equipment	27.5%
Medium Duty Vehicles	8.5%	Bus	9.3%
Medium Heavy Duty Vehicles	3.9%	Medium Duty Vehicles	9.3%
Bus	3.8%	Fuel Storage and Handling	6.4%

Additionally, Figure 29 presents the emission trends for NOx, ROG, and PM2.5 in the South Coast Air Basin from 2012 through 2030 using projected emissions from the latest SIP emissions inventory.[86] The forecasted emissions provide an initial assessment of future emission trends and air quality benefits in the air basin, reflecting the effects of regional growth assumptions and adopted CARB and District rules as of March 2020. It also provides an indication of the emissions trends that will be seen in the community as a result of existing emissions reduction programs. A community-scale forecasted inventory will be developed to evaluate the air quality benefits of adopted rules and ongoing and potential future rulemaking activities if the South Los Angeles is selected as a 2020 community.

[84] See Appendix E in this document for methodology and additional information on the emissions inventory. For more details on source categories and associated activities (emission inventory codes), see documentation at https://ww3.arb.ca.gov/ei/documentation.htm.

[85] Explanation of vehicle categories: https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf

[86] Based on the latest SIP inventory with a 2017 base year (CEPAM 2019SIP v1.00).

Figure 29. Projected Emission Trends for Major Source Categories in the South Coast Air Basin (Emissions in Tons per Day)

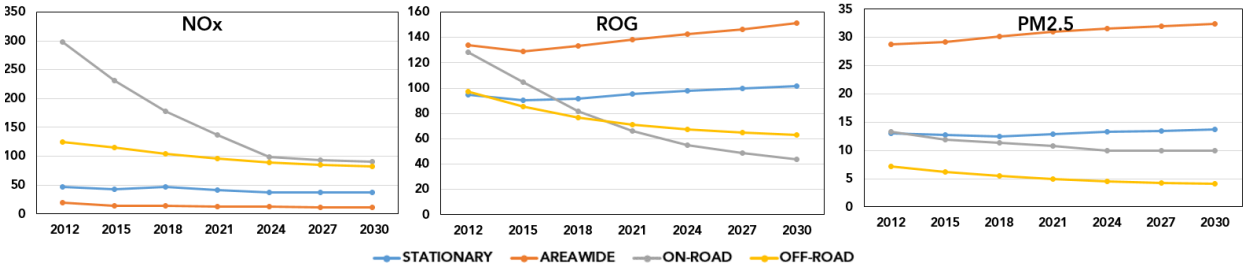
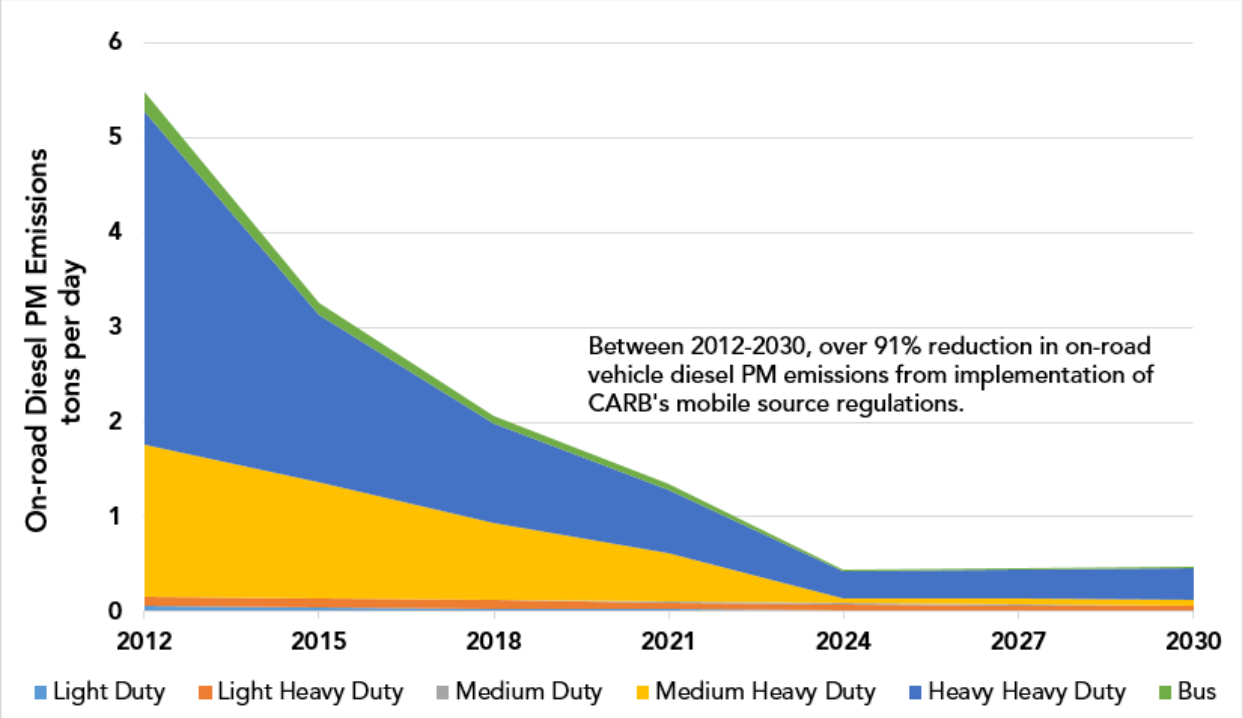


Figure 30 shows the trend of diesel PM emissions from on-road vehicles in the South Coast Air Basin – the emissions are projected to decrease significantly in future years from implementation of adopted mobile source regulations, including CARB's Truck and Bus Regulation.[87]

Figure 30. Projected Emission Trends for On-road Vehicle Diesel PM in the South Coast Air Basin (Emissions in Tons per Day) [87]

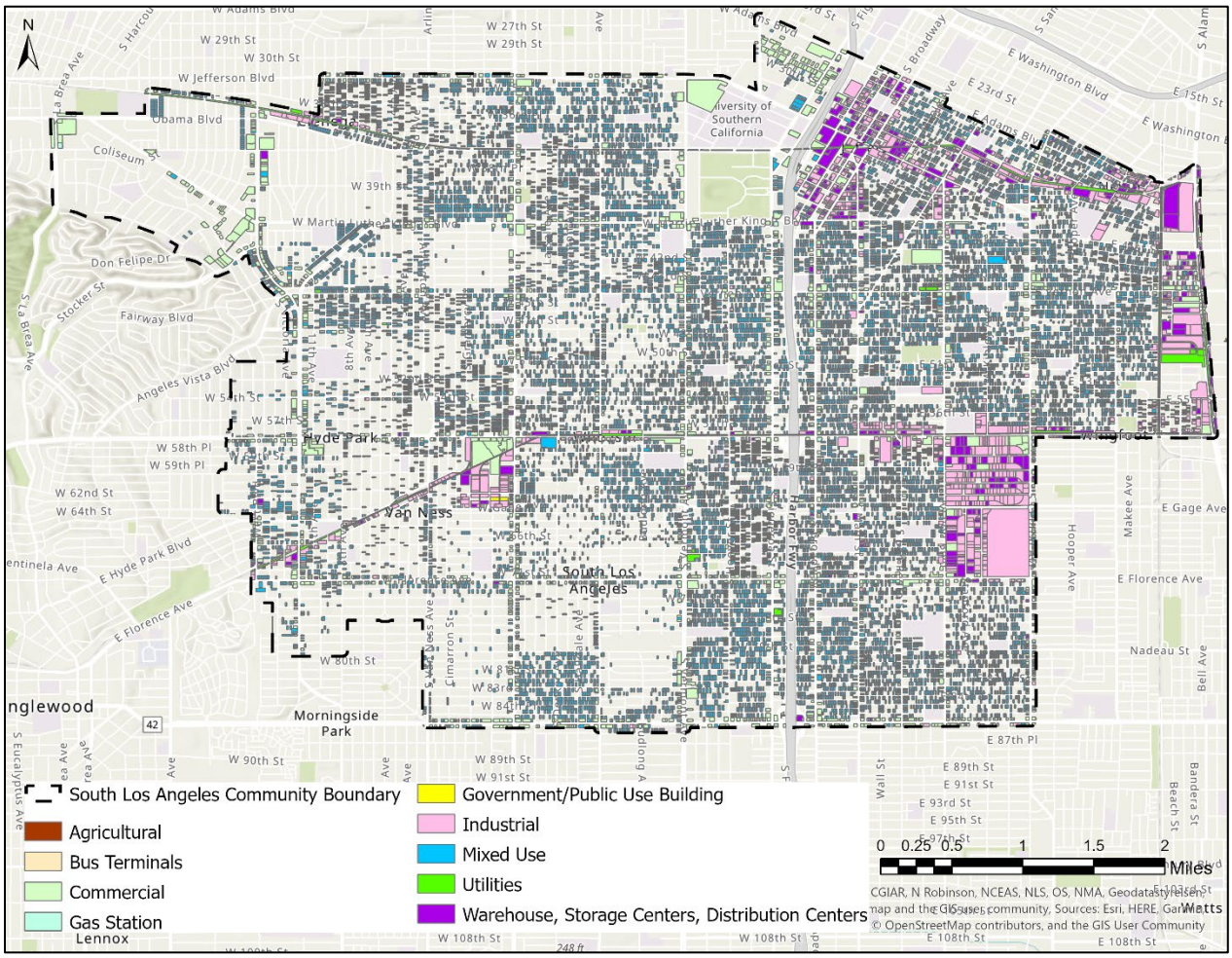


[87] More information on the Truck and Bus Regulation available at: https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation

c. Proximity-Based Exposure

The South Los Angeles Community has an area of 14,918 acres. Around 56 percent of the land use is zoned residential and has about the same acreage of commercial and industrial land use (5 percent each). In addition, about 28 percent of the land use is zoned for mixed use, which include use for commercial, industrial, and residential. The map in Figure 31 illustrates the industrial land use categories within the community boundary. Within the community, the most prominent industrial land use is in the east side of the community and along the Atchison, Topeka, and Santa Fe Railway. Assessor Parcel Number (APN) data also shows the largest industrial land use is associated with light manufacturing (226 acres), followed by industrial warehouse (103 acres), industrial vacant land (55 acres), and general industrial (39 acres).

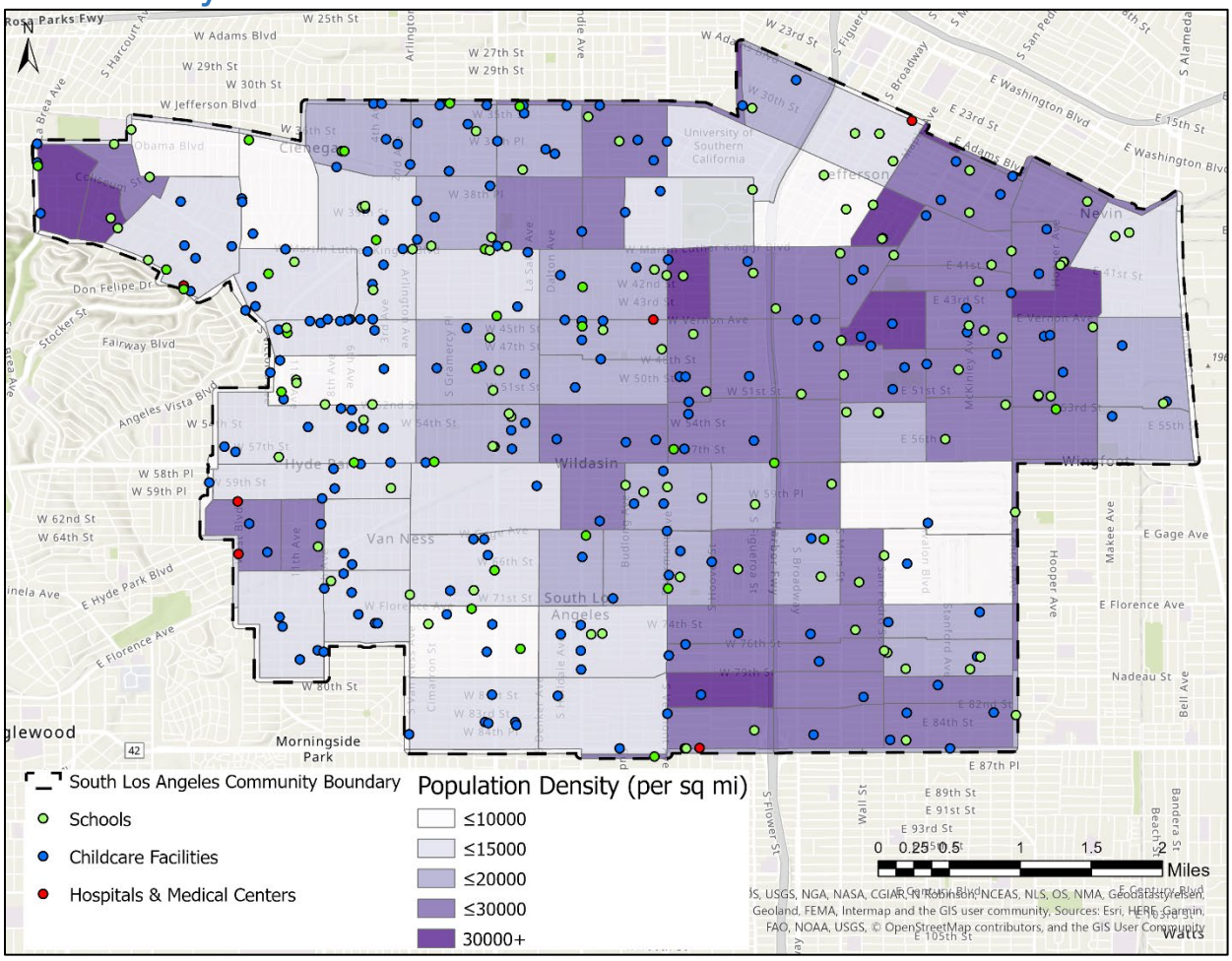
Figure 31. Land Use Map for South Los Angeles Community[88]



[88] Data Source: https://www.digmap.com/7platform/smartparcels/, https://www.cde.ca.gov/ds/, http://data-cdphdata.opendata.arcgis.com/, and https://ww3.arb.ca.gov/research/apr/past/11-336.pdf

A comparison of the maps in Figure 31 and Figure 32 show that there are areas within the community where the industrially zoned areas are directly adjacent to or surround residential areas. The industrial region in the southeastern side of the community is separate from the densely populated residential region by a single freeway. The industrial region in the southeastern side of the community is directly adjacent to residential regions and several schools and childcare facilities. In addition, there are many warehouses, storage centers, and distribution centers surrounding the University of Southern California, which exposes the sensitive receptors in that region to heightened amount of traffic to-and-from these facilities.

Figure 32. Population Density and Sensitive Receptor for the South Los Angeles Community [89]



[89] Data Source: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

Appendix A
2020 Community Nominations

In 2019, the Board directed staff to develop a list of "Strongly Supported Communities", these are communities that have been nominated by community members, community groups, and/or the air districts repeatedly since the program inception and have shown strong support. This list (Table A-1) was release to the public in CARB's June 2020 kick off meeting for the Program. While this list shows the communities that have previously been strongly supported additional communities can be added.

Table A - 1. Strongly Supported Communities

Community Type	Community	Air District
Exiting monitoring communities	Richmond – San Pablo	Bay Area
	South Sacramento - Florin	Sacramento
Continually supported communities	East Contra Costa County	Bay Area
	East Oakland	Bay Area
	Eastern San Francisco	Bay Area
	San Jose	Bay Area
	Tri-Valley	Bay Area
	Vallejo	Bay Area
	Northern Imperial County Corridor- Bombay Beach, Brawley, Calipatria, Desert Shores, Niland, Salton City, Salton Sea Beach, Salton Sea, Seeley, Westmorland	Imperial
	South Natomas	Sacramento
	Norwood, Old North Sacramento, Del Paso Heights	Sacramento
	International Border Community - Otay Mesa, San Ysidro	San Diego
	Arvin Lamont	San Joaquin
	La Vina	San Joaquin
	Madera	San Joaquin
	Maywood, Commerce (east), Vernon, Bell	South Coast
	Pacoima, North Hollywood, Sun Valley, San Fernando	South Coast
	South Los Angeles, South Central Los Angeles, Hyde Park	South Coast
	Inglewood	South Coast

Since the release of the 2019 Community Recommendations Staff Report[90] (2019 Staff Report) CARB has received the following (Table A-2) additional community

[90] The 2019 Community Recommendations Staff Report. Available at: https://ww2.arb.ca.gov/capp-selection.

nominations for focused action from community members, community groups, and local air districts. Air quality, socio-economic, and other metrics for most of these communities can be found in the Table of Metrics in Appendix B of the 2018 Community Recommendations Staff Report[91].

All communities have been recommended for both a community air monitoring program and community emissions reduction program, with the exception of the Sacramento communities: Meadowview, North Sacramento, and Oak Park, Fruitridge communities which were recommended for only an air monitoring program.

Table A - 2. Community Nominations Received in 2020

Community Nominations	Air District Nomination	Community Nomination	Air District	City/Area in the 2018 Table of Metrics (Ref. #)
Richmond - San Pablo	x		Bay Area	Richmond (72)
				San Pablo (87)
North End of Imperial County	x	x	Imperial County	Winterhaven (117)
				Brawley (109)
				Calipatria (111)
				Thermal Imperial County (115)
				El Centro (112)
				Westmorland (116)
Meadowview	x		Sacramento	Sacramento (392)
North Sacramento	x		Sacramento	Sacramento (392)
Oak Park, Fruitridge	x		Sacramento	Sacramento (392)
Arvin, Lamont	x	x	San Joaquin Valley	Arvin (485)
				Lamont (527)
La Vina	x	x	San Joaquin Valley	Madera (539)
Lindsay		x	San Joaquin Valley	Lindsay (533)
Inglewood		x	South Coast	Inglewood (663)
South Los Angeles	x	x	South Coast	Los Angeles (687)

[91] Appendix B: Table of Metrics. Available at: https://ww2.arb.ca.gov/resources/documents/appendix-b-table-metrics

Appendix B
California Environmental Quality Act

California Environmental Quality Act

CARB has determined that the statewide assessment completed in 2018 and the 2020 community recommendations are exempt from the California Environmental Quality Act (CEQA) under the "general rule" or "common sense" exemption (California Code of Regulations, title 14, section 15061(b)(3)). The common sense exemption states a project is exempt from CEQA if "the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA."

CARB's statewide assessment completed in 2018 and the 2020 community recommendations is administrative in nature in that it merely provides CARB's assessment to identify communities with high cumulative pollution exposure burdens and to identify the communities CARB staff is recommending the CARB Board select for deployment of air monitoring or development of an emissions reduction program. The assessment and selection of communities will have no potential for material impact on the environment. After the communities are selected, individual strategies will be developed by the air districts that will involve extensive decision-making processes, including the involvement of community steering committees, and cannot be forecasted with reasonable specificity. The specific strategies adopted by the air districts will vary based on the local air quality needs, topography, and meteorology, existing emissions reducing measures and community engagement. Moreover, the air districts (as CEQA lead agencies) are required to conduct CEQA compliance, as applicable.

Based on CARB's review it can be seen with certainty that there is no possibility that CARB's statewide assessment completed in 2018 and the 2020 community recommendations may result in a significant adverse impact on the environment; therefore, this activity is exempt from CEQA. If the proposal is finalized, a Notice of Exemption will be filed with the Office of the Secretary for the Natural Resources Agency.

Appendix C
Regulatory and Community Air Quality Monitoring Sites

Figure C - 1. Location of Air Quality Monitoring Sites: Richmond-Point Richmond (ARB: 07432), Richmond-7th Street (ARB: 07441), San Pablo-Rumrill (ARB: 07447), Atchison CMS, North Richmond CMS, and Point Richmond CMS

Figure C - 2. Location of Air Quality Monitoring Site: Arvin – Di Giorgio (ARB: 15249)

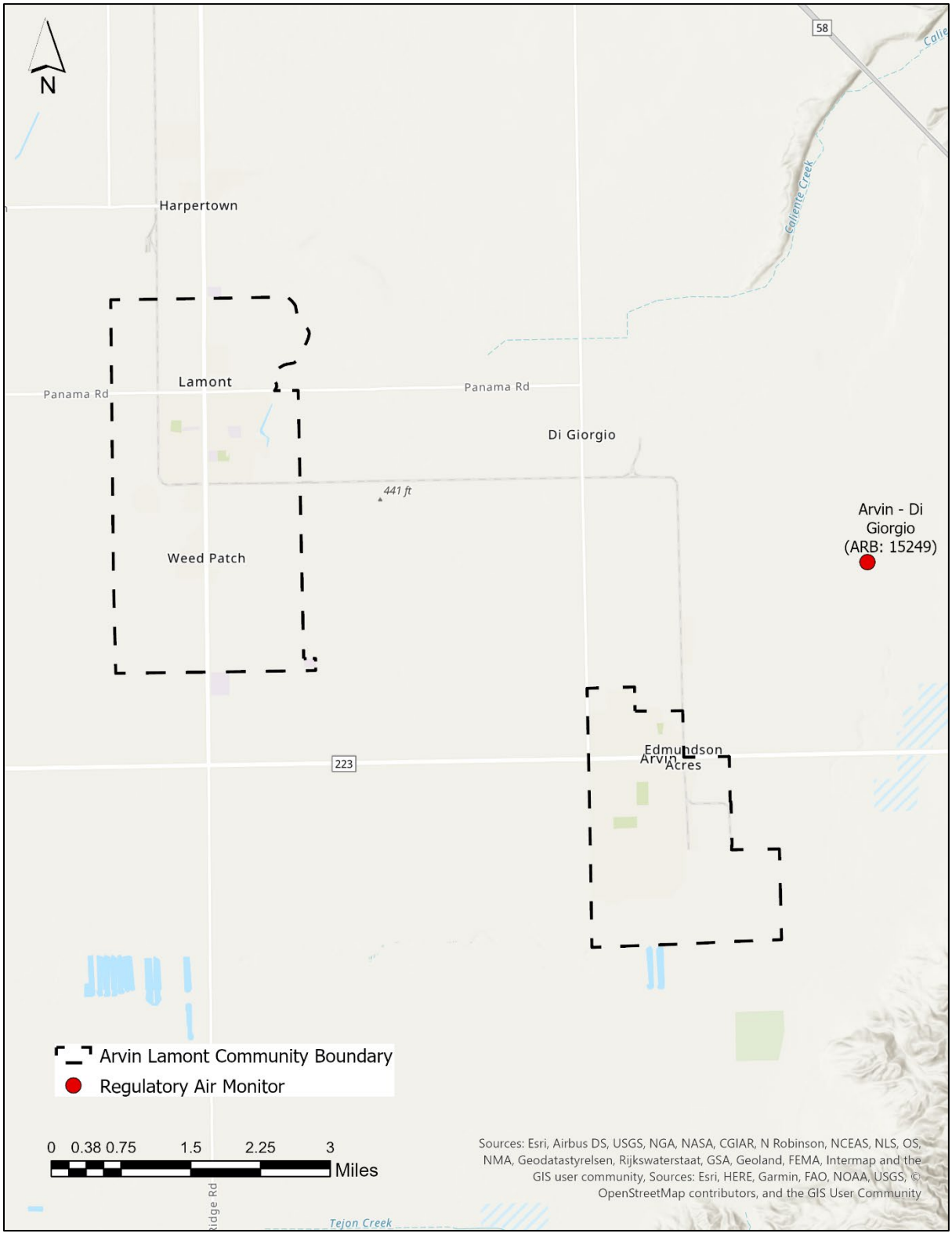
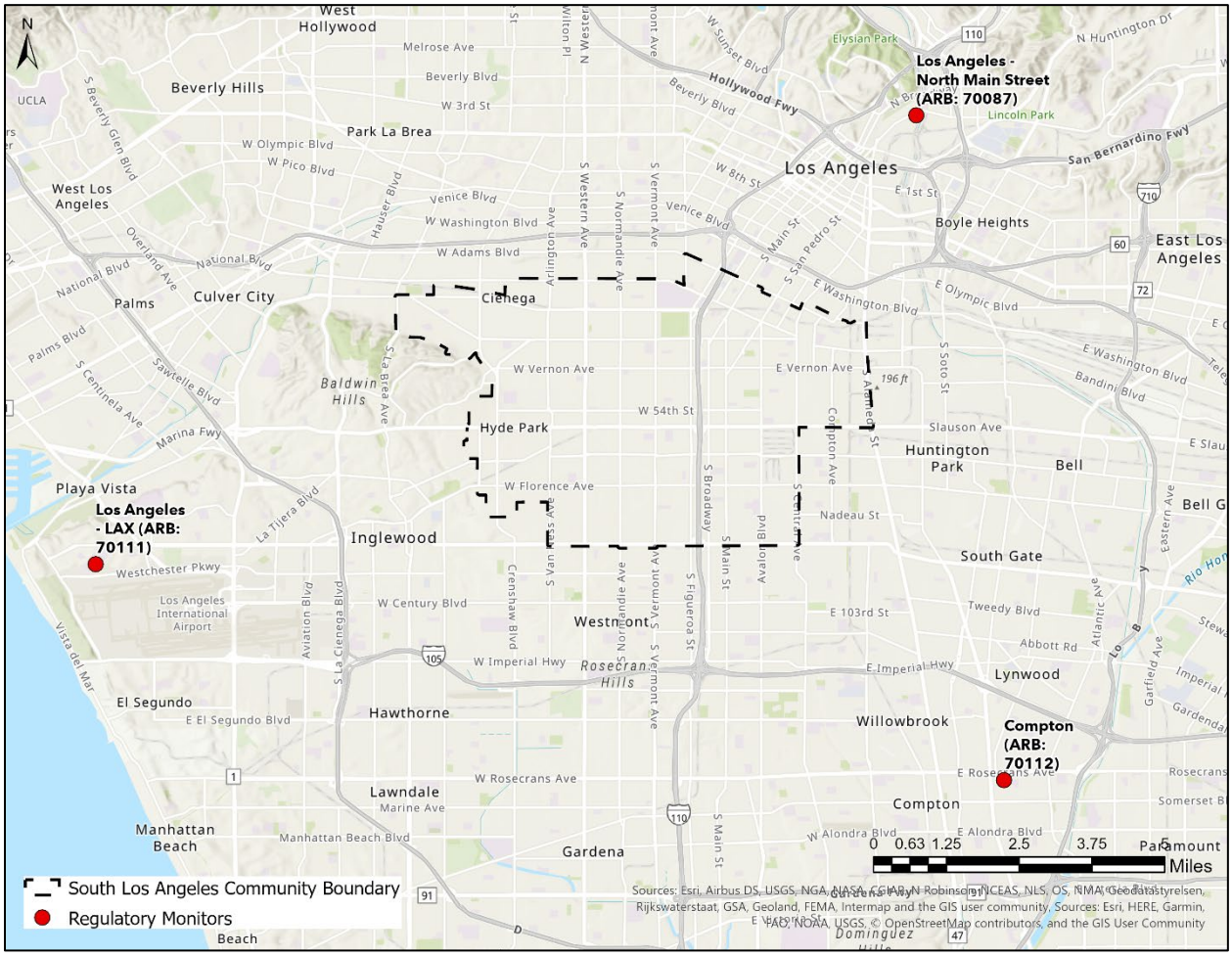


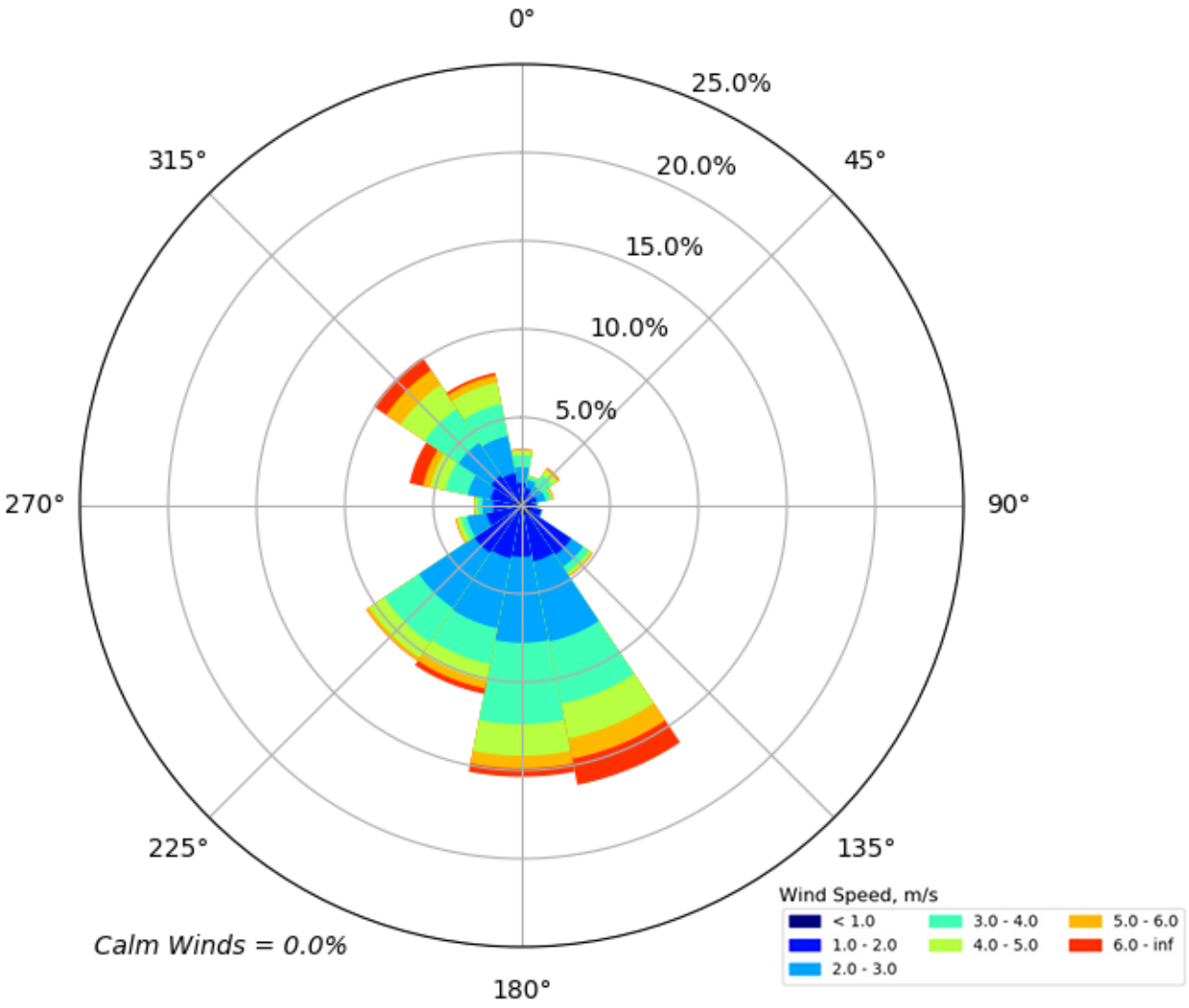
Figure C - 3. Location of Air Quality Monitoring Sites: Los Angeles – North Main Street (ARB: 70087), Los Angeles – LAX (ARB: 70111), and Compton (ARB: 70112)



Appendix D
Wind or Pollution Rose Description

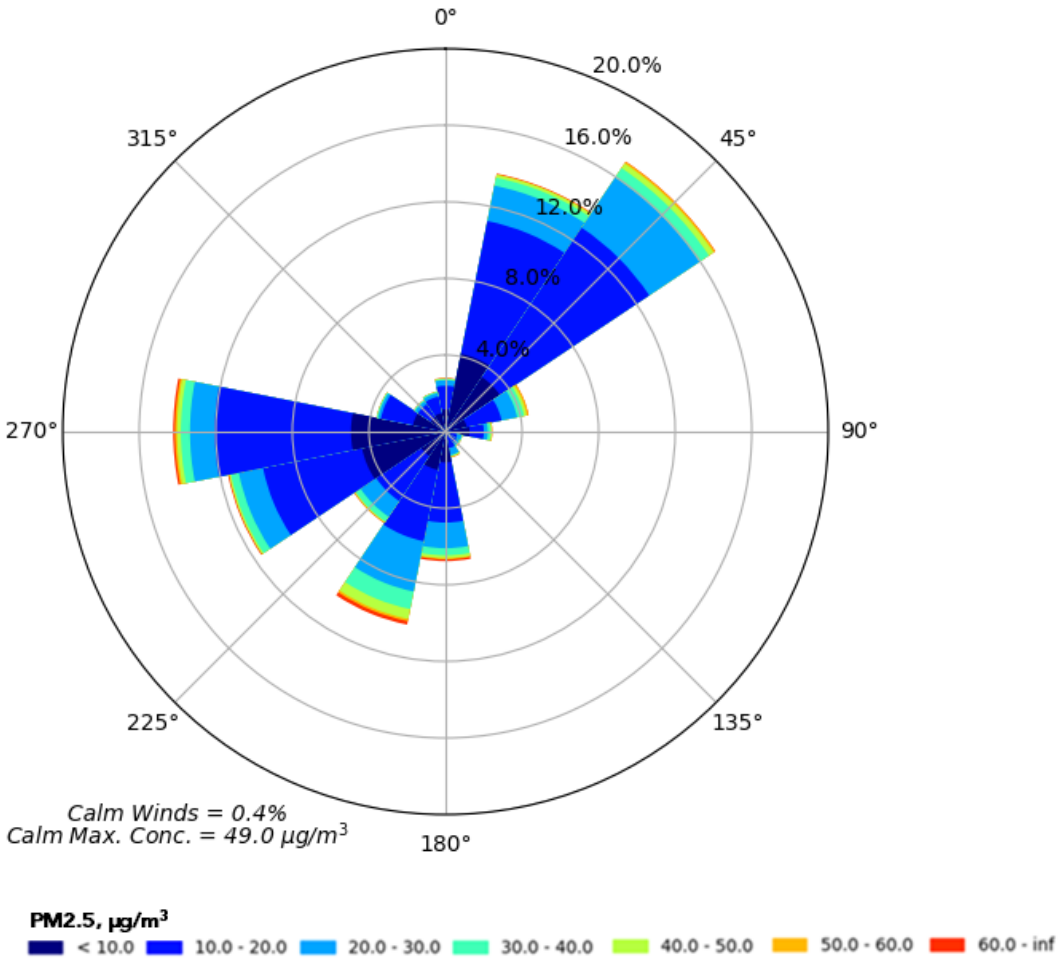
The wind located in each section of this staff report show the general direction the wind is coming from, how frequently the wind came from that direction, and the wind speed related to that wind direction and frequency. The vector originating out from the center of the circular format of the wind rose shows the direction the winds blew from and the length of vector from the center of the circle shows how often the wind blew from that direction. The color of the vector relates to the wind speed for wind roses. For example, the wind rose below shows that during this sampling period, the wind blew from the south-southeast approximately 16 percent of the time. The color scale shows that during the period when the wind was blowing from this direction, the wind speed was predominantly between 2 – 3 m/s and 3 – 4 m/s. The bottom left corner of the wind rose shows the percentage of calm winds within the data set. Calm winds defined as wind speed equals to zero and are excluded from the wind rose plots because direction vectors are not present in calm winds.

Figure D-1. Wind Rose Diagram



The pollution rose located in each section of this staff report show the general direction the wind is coming from, how frequently the wind came from that direction, and the pollution levels related to that wind direction and frequency. The vector originating out from the center of the circular format of the pollution rose shows the direction the winds blew from and the length of vector from the center of the circle shows how often the wind blew from that direction. The color of the vector relates to the pollution levels for pollution roses. For example, the wind rose below shows that during this sampling period, the wind blew from the northeast approximately 17 percent of the time. The color scale shows that during the period when the wind was blowing from this direction, the pollutant level was predominantly between 10 µg/m^3 to 20 µg/m^3. The bottom left corner of the pollution rose shows the percentage of calm winds within the data set. Calm winds defined as wind speed equals to zero and are excluded from the pollution rose plots because direction vectors are not present in calm winds. The pollution rose also shows the maximum concentration of the measured pollutant during calm winds.

Figure D-2. Pollution Rose Diagram



Appendix E
Preliminary Community Emissions Inventory

A preliminary emissions inventory was developed for each community using best available data for stationary, areawide, and mobile sources. A brief description of these source categories and types of sources that are included in them is available at CARB's emissions inventory data website.[92]

Preliminary stationary source emissions inventory for this community was developed using the 2018 facility specific emissions reported to CARB by the local air district into CARB's California Emission Inventory Development and Reporting System (CEIDARS).[93] For area source and off-road mobile source inventory, the 2018 projected emissions from the latest State Implementation Plan emissions inventory (2017 base year) was gridded at a 1 kilometer (km) by 1 km resolution, and total emissions for the community was developed by summing the emissions from the individual grids (see Figure E.a.1, for example). Gridded on-road mobile source inventory was developed using 2018 vehicle miles traveled data from regional Metropolitan Planning Organization(s)[94] in their adopted Regional Transportation Plan/ Sustainable Communities Strategy, and county-level aggregated emissions factors and vehicle distribution from CARB's on-road mobile source model (EMFAC2017).[95]

The results presented in Appendix E are preliminary estimations of the air emissions in the community. Note that this preliminary emissions inventory presents aggregated emissions for the 1-km grids. This includes emissions for grids fully within the community boundary and partially intersecting the community boundary. Emissions were not area-weighted for grids that are only partially within the community boundary. A refined and more comprehensive community-level emissions inventory will be developed with the community and associated air district as a part of a community emissions reduction program, if selected by CARB Board in 2020.

[92] https://ww3.arb.ca.gov/ei/emissiondata.htm. The emissions used to develop the preliminary inventory are based on the latest SIP inventory with a 2017 base year (CEPAM 2019SIP v1.01).
[93] The facility locations were mapped, and all facilities that are located within the 1-km grids are included in the preliminary emission inventory.
[94] Metropolitan Transportation Commission for the Richmond-San Pablo Community, Kern Council of Governments for the Arvin, Lamont Community, and the Southern California Association of Governments for the South LA community
[95] Data Source: https://www.arb.ca.gov/emfac/2017/

a. Richmond-San Pablo Community Preliminary Emissions Inventory

Figure E.a.1. 1 km x 1 km Grids Used to Develop the Richmond-San Pablo Community Preliminary Emissions Inventory

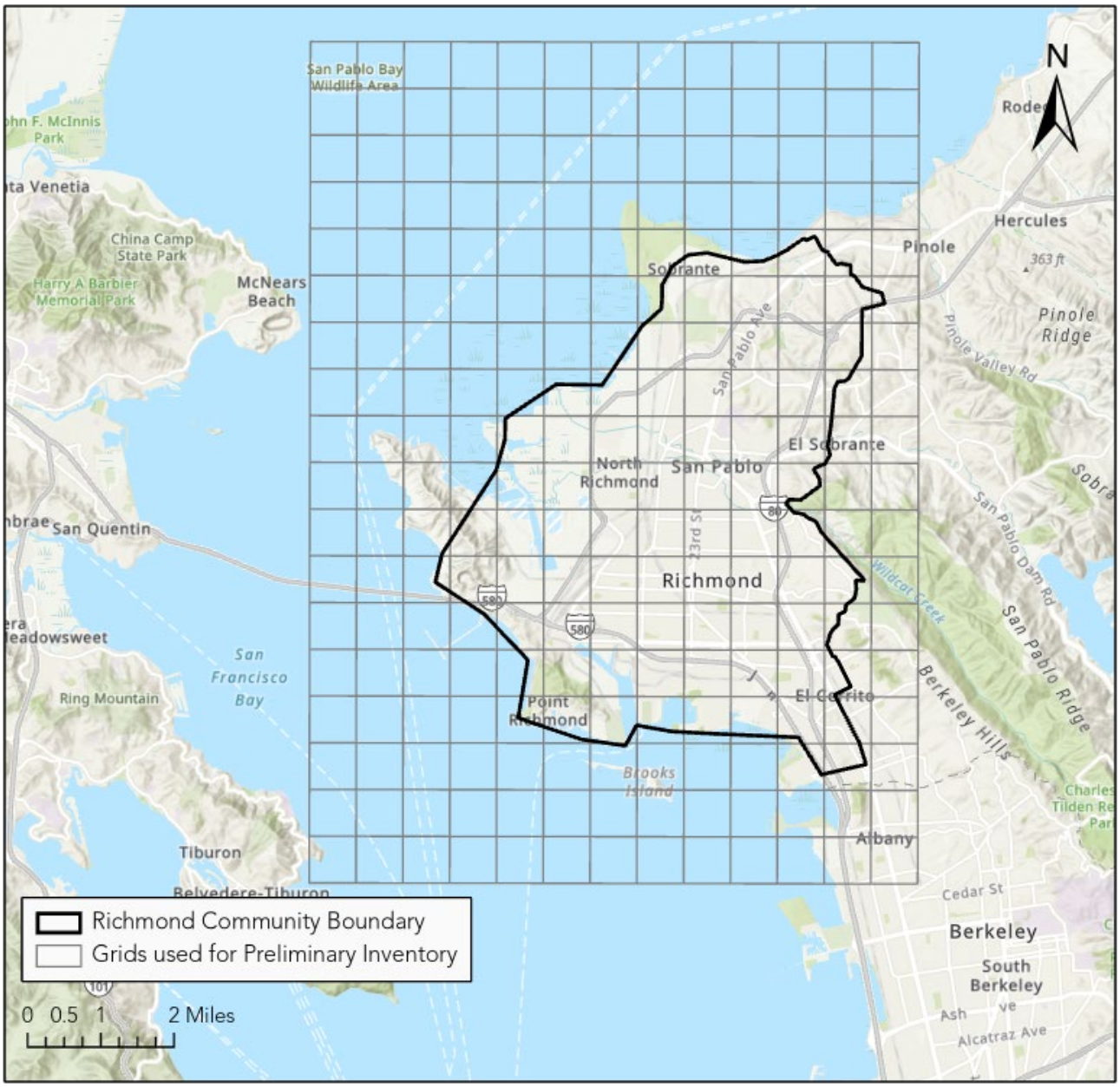


Figure E.a.2. Proposed Richmond-San Pablo Community PM2.5 Emissions (2019 Preliminary Emissions Inventory)

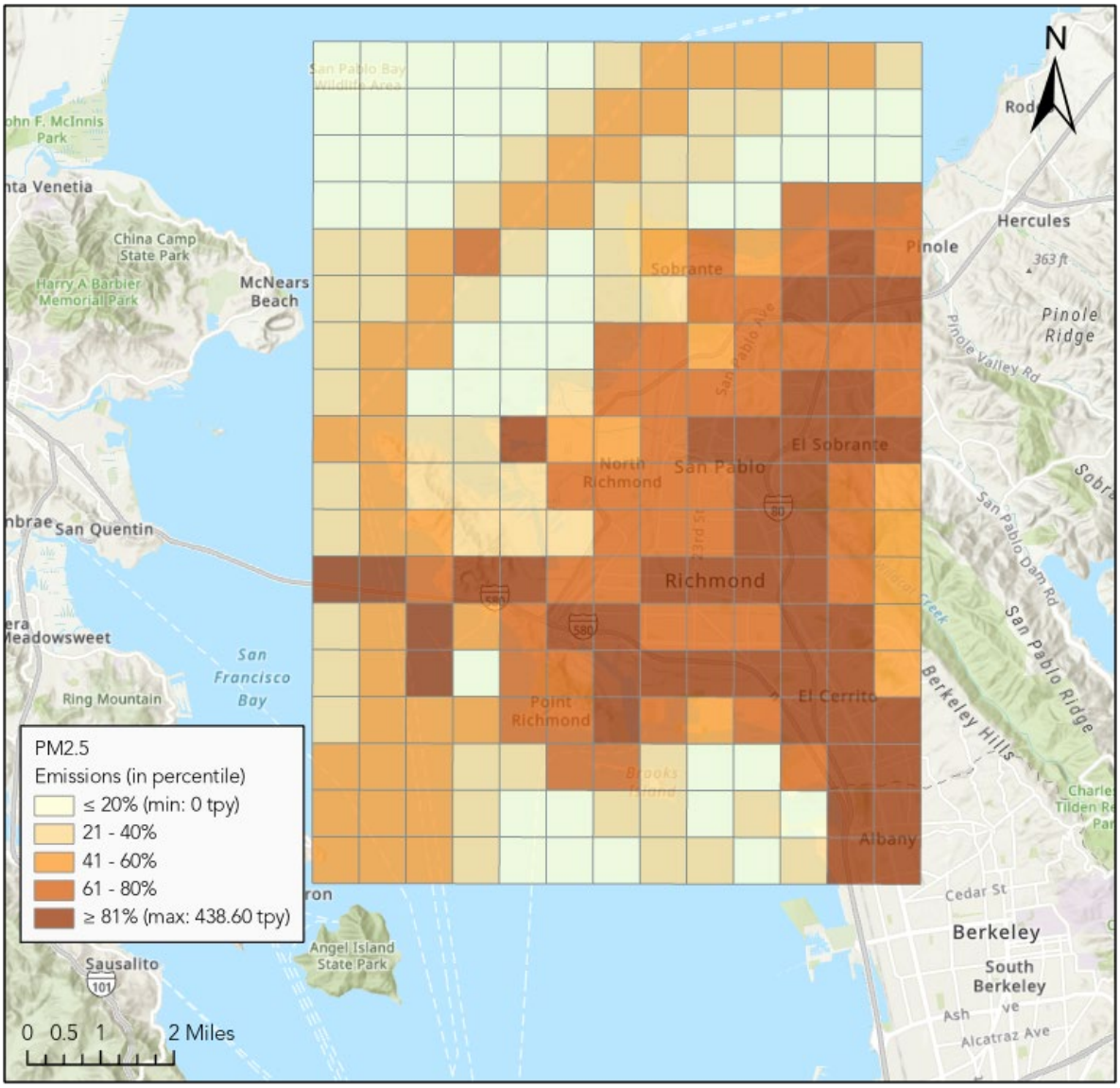


Figure E.a.3. Proposed Richmond-San Pablo Community ROG Emissions (2019 Preliminary Emissions Inventory)

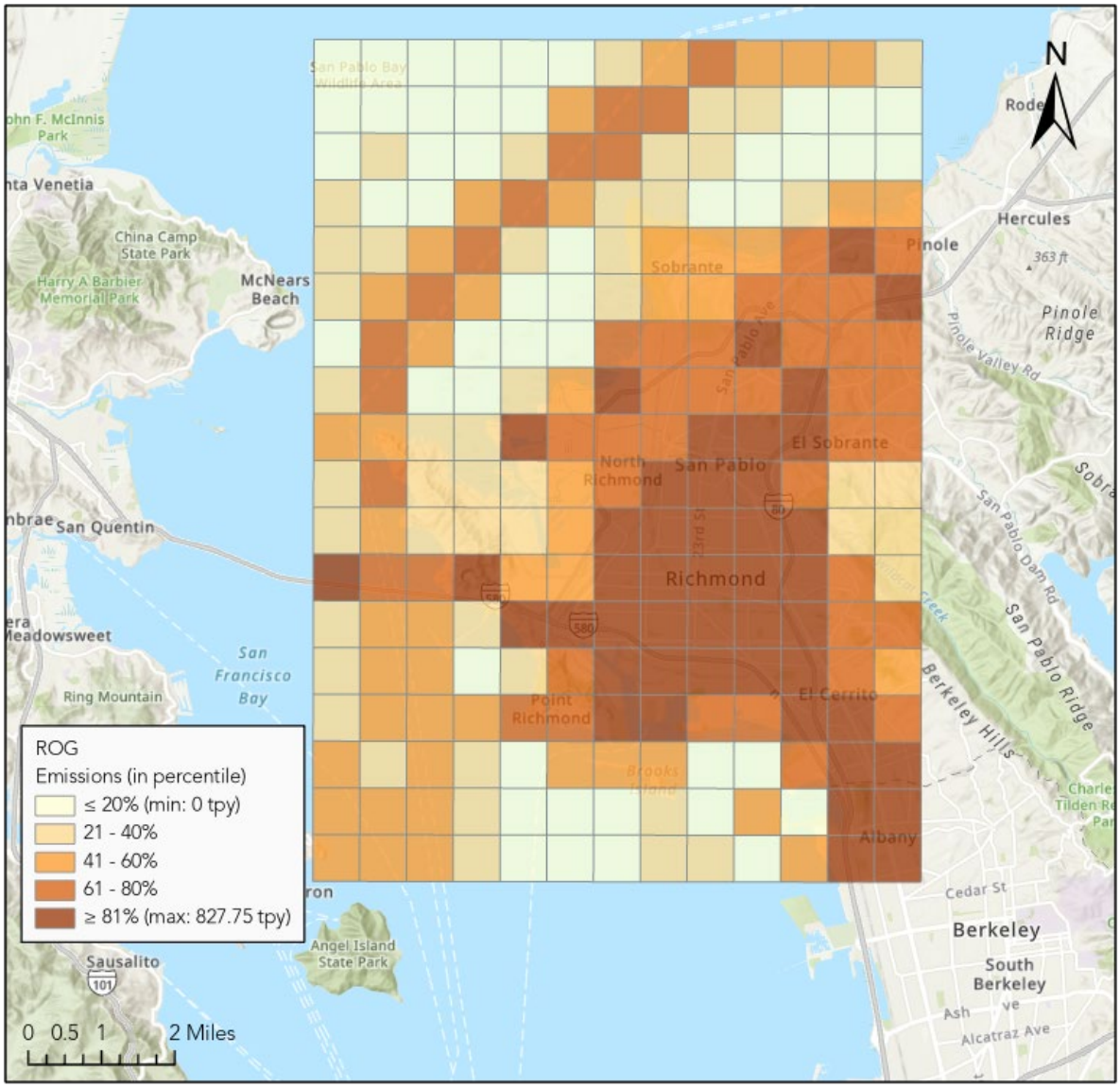


Figure E.a.4. Proposed Richmond-San Pablo Community Diesel PM Emissions (2019 Preliminary Emissions Inventory)

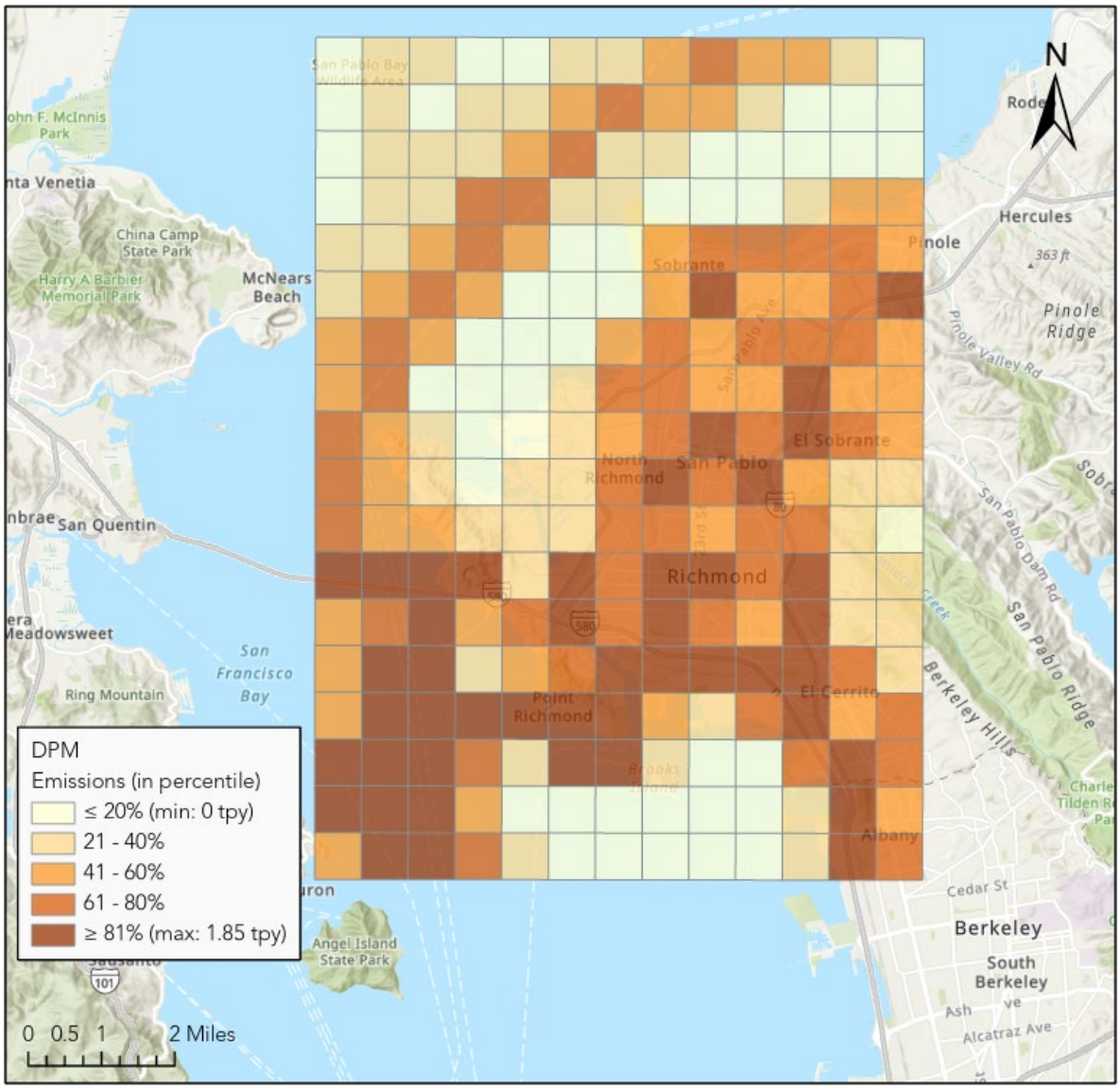


Figure E.a.5. Proposed Richmond-San Pablo Community Diesel PM Emissions

Table E.a.1. Preliminary Emissions Estimate for the Richmond-San Pablo Community (2019 Preliminary Emissions Inventory)

Stationary (tons/year)			Areawide (tons/year)			Mobile (tons/year)		
PM2.5	ROG	DPM	PM2.5	ROG	DPM	PM2.5	ROG	DPM
534	1,685	1	214	696	0	97	835	33
% of Community Total								
63.2 %	52.4 %	1.9 %	25.3 %	21.7 %	0.0 %	11.4 %	26.0 %	98.1 %

Table E.a.2. Detailed Preliminary Emissions Inventory for the Richmond-San Pablo Community (2019 Emissions in tons per year) [96]

Source Category	NOx	TOG	ROG	SOx	PM_{10}	$PM_{2.5}$	DPM
STATIONARY SOURCES							
Fuel Combustion	**941.01**	**482.70**	**202.93**	**337.55**	**399.06**	**386.37**	**0.63**
Electric Utilities	*2.32*	*21.73*	*2.10*	*0.02*	*0.23*	*0.23*	*0.02*
Cogeneration	*65.85*	*60.14*	*8.92*	*5.44*	*11.74*	*11.72*	*0.00*
Petroleum Refining (Combustion)	*655.60*	*236.11*	*145.70*	*325.59*	*342.55*	*330.00*	*0.00*
Manufacturing and Industrial	*88.38*	*46.16*	*20.36*	*3.16*	*25.56*	*25.51*	*0.03*
Food and Agricultural Processing	*17.49*	*1.55*	*0.42*	*0.10*	*0.71*	*0.71*	*0.00*
Service and Commercial	*90.76*	*115.59*	*24.19*	*3.25*	*17.79*	*17.75*	*0.09*
Other (Fuel Combustion)	*20.62*	*1.42*	*1.25*	*0.00*	*0.48*	*0.46*	*0.49*
Waste Disposal	**0.84**	**2321.28**	**17.99**	**0.03**	**0.05**	**0.05**	**0.00**
Sewage Treatment	*0.12*	*3.48*	*2.44*	*0.02*	*0.00*	*0.00*	*0.00*
Landfills	*0.11*	*2317.44*	*15.32*	*0.00*	*0.00*	*0.00*	*0.00*
Incinerators	*0.60*	*0.07*	*0.03*	*0.00*	*0.01*	*0.01*	*0.00*
Soil Remediation	*0.00*	*0.00*	*0.00*	*0.00*	*0.04*	*0.04*	*0.00*
Other (Waste Disposal)	*0.00*	*0.28*	*0.20*	*0.00*	*0.00*	*0.00*	*0.00*
Cleaning and Surface Coatings	**0.01**	**346.50**	**279.61**	**0.00**	**0.00**	**0.00**	**0.00**
Laundering	*0.00*	*5.96*	*5.58*	*0.00*	*0.00*	*0.00*	*0.00*
Degreasing	*0.00*	*80.31*	*29.18*	*0.00*	*0.00*	*0.00*	*0.00*
Coatings and Related Process Solvents	*0.01*	*110.06*	*105.74*	*0.00*	*0.00*	*0.00*	*0.00*
Printing	*0.00*	*34.87*	*34.85*	*0.00*	*0.00*	*0.00*	*0.00*
Adhesives and Sealants	*0.00*	*114.72*	*103.75*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Cleaning and Surface Coatings)	*0.00*	*0.57*	*0.51*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Production and Marketing	**15.86**	**1510.39**	**725.46**	**88.95**	**99.18**	**95.47**	**0.00**
Oil and Gas Production	*0.00*	*0.01*	*0.01*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Refining	*15.86*	*567.08*	*505.32*	*88.95*	*99.18*	*95.47*	*0.00*
Petroleum Marketing	*0.00*	*934.06*	*210.89*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Petroleum Production and Marketing)	*0.00*	*9.24*	*9.24*	*0.00*	*0.00*	*0.00*	*0.00*

[96] For more details on source categories and associated activities (emission inventory codes), see documentation at https://ww2.arb.ca.gov/emission-inventory-documentation
NOx: nitrogen oxides; TOG: total organic gases; ROG: reactive organic gases; SOx: sulfur oxides; PM_{10}: particulate matter 10 microns or smaller; $PM_{2.5}$: particulate matter 2.5 microns or smaller; DPM: diesel particulate matter

Table E.a.3. Detailed Preliminary Emissions Inventory for Richmond-San Pablo (Continued) (Emissions in tons per year)

Source Category	NOx	TOG	ROG	SOx	PM_{10}	$PM_{2.5}$	DPM
Industrial Processes	**29.91**	**533.31**	**458.55**	**205.92**	**86.89**	**52.59**	**0.00**
Chemical	*0.00*	*48.76*	*42.31*	*160.52*	*53.74*	*35.44*	*0.00*
Food and Agriculture	*0.36*	*14.55*	*12.41*	*0.00*	*0.06*	*0.04*	*0.00*
Mineral Processes	*29.41*	*14.37*	*11.72*	*44.38*	*23.13*	*11.72*	*0.00*
Metal Processes	*0.09*	*0.18*	*0.12*	*0.00*	*3.43*	*1.99*	*0.00*
Wood and Paper	*0.00*	*0.00*	*0.00*	*0.00*	*0.14*	*0.09*	*0.00*
Other (Industrial Processes)	*0.05*	*455.45*	*391.99*	*1.02*	*6.38*	*3.32*	*0.00*
Chemical	*0.00*	*48.76*	*42.31*	*160.52*	*53.74*	*35.44*	*0.00*
Total Stationary Sources	**987.6**	**5,194.2**	**1,684.5**	**632.5**	**585.2**	**534.5**	**0.6**
AREAWIDE SOURCES							
Solvent Evaporation	**0.00**	**710.71**	**612.19**	**0.00**	**0.00**	**0.00**	**0.00**
Consumer Products	0.00	509.50	424.17	0.00	0.00	0.00	0.00
Architectural Coatings and Related Process Solvents	0.00	191.78	179.98	0.00	0.00	0.00	0.00
Pesticides/Fertilizers	0.00	1.57	1.57	0.00	0.00	0.00	0.00
Asphalt Paving / Roofing	0.00	7.85	6.46	0.00	0.00	0.00	0.00
Miscellaneous Processes	**174.57**	**174.43**	**83.93**	**4.13**	**504.53**	**214.15**	**0.00**
Residential Fuel Combustion	173.33	155.96	70.56	4.13	147.31	142.38	0.00
Construction and Demolition	0.00	0.00	0.00	0.00	108.31	10.85	0.00
Paved Road Dust	0.00	0.00	0.00	0.00	216.04	32.62	0.00
Unpaved Road Dust	0.00	0.00	0.00	0.00	1.71	0.17	0.00
Fugitive Windblown Dust	0.00	0.00	0.00	0.00	1.09	0.16	0.00
Fires	0.92	3.27	2.81	0.00	2.77	2.59	0.00
Cooking	0.00	1.88	1.25	0.00	22.51	22.51	0.00
Other (Miscellaneous Processes)	0.32	13.32	9.31	0.00	4.79	2.87	0.00
Total Areawide Sources	**174.6**	**885.1**	**696.1**	**4.1**	**504.5**	**214.2**	**0.00**
ON-ROAD MOBILE SOURCES							
Light Duty Vehicles	173.19	260.97	238.43	4.27	65.04	27.18	0.12
Light Heavy Duty Vehicles	85.48	22.78	20.99	0.41	5.31	2.66	0.82
Medium Duty Vehicles	53.38	56.86	52.08	1.05	10.96	4.60	0.03
Medium Heavy Duty Vehicles	82.18	7.92	6.94	0.21	4.93	3.31	2.35
Heavy Heavy Duty Vehicles	188.48	11.15	8.48	0.50	6.21	4.09	3.11
Bus	16.85	2.63	0.94	0.09	1.63	0.78	0.19
Total On-road Mobile Sources	**599.6**	**362.3**	**327.9**	**6.5**	**94.1**	**42.6**	**6.6**
OTHER MOBILE SOURCES							
Trains	115.20	3.02	2.66	0.11	2.01	1.85	2.00
Ocean Going Vessels	587.79	37.87	32.66	41.32	13.50	12.42	5.82
Commercial Harbor Craft	351.89	45.52	40.02	0.05	10.77	10.30	10.83
Recreational Boats	76.03	246.89	227.81	0.12	15.14	14.45	0.03
Off-Road Recreational Vehicles	0.03	1.71	1.70	0.00	0.00	0.00	0.00

Source Category	NOx	TOG	ROG	SOx	PM_{10}	$PM_{2.5}$	DPM
Off-Road Equipment	214.02	185.46	173.10	0.37	15.74	15.05	7.66
Fuel Storage and Handling	0.00	28.75	28.75	0.00	0.00	0.00	0.00
Total Other Mobile Sources	**1,345.0**	**549.2**	**506.7**	**42.0**	**57.2**	**54.1**	**26.4**
Total Community Emissions	**3,107**	**6,991**	**3,215**	**685**	**1,241**	**845**	**34**

b. Arvin, Lamont Community Preliminary Emissions Inventory

Figure E.b.1. 1 km x 1 km Grids Used to Develop the Arvin, Lamont Community Preliminary Emissions Inventory

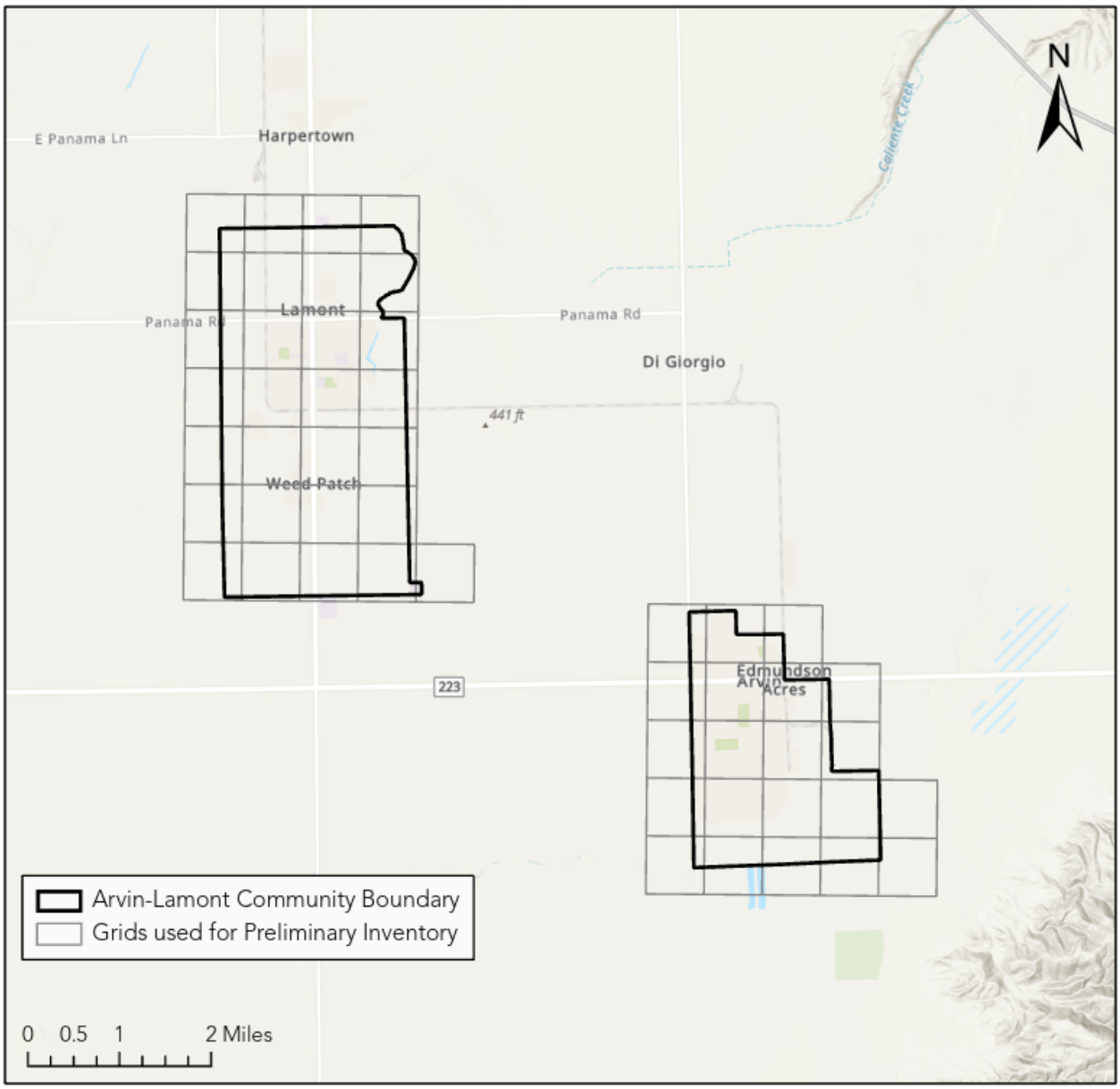


Figure E.b.6. Proposed Arvin, Lamont Community PM2.5 Emissions (2019 Preliminary Emissions Inventory)

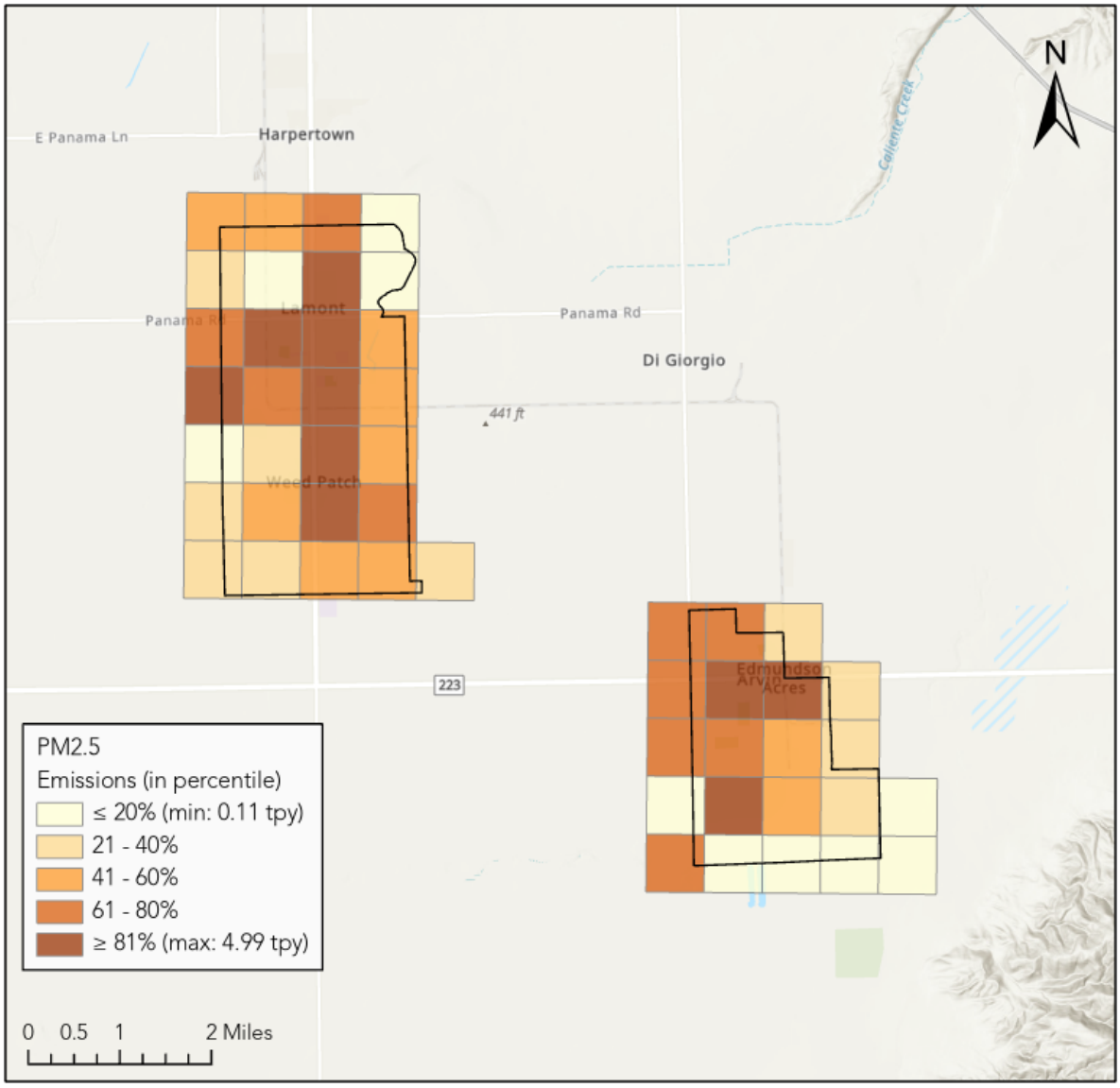


Figure E.b.7. Proposed Arvin, Lamont Community ROG Emissions (2019 Preliminary Emissions Inventory)

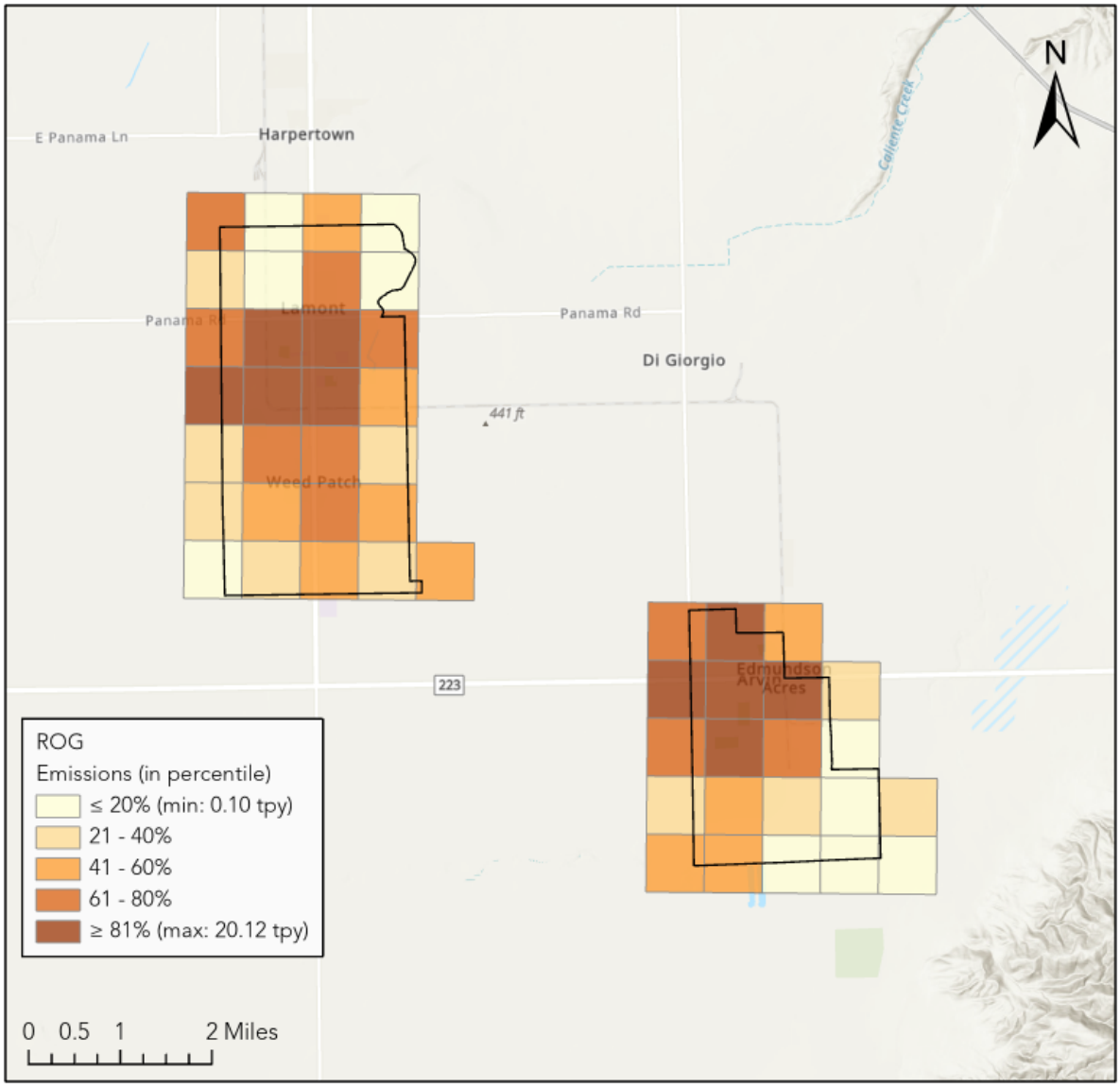


Figure E.b.8. Proposed Arvin, Lamont Community Diesel PM Emissions (2019 Preliminary Emissions Inventory)

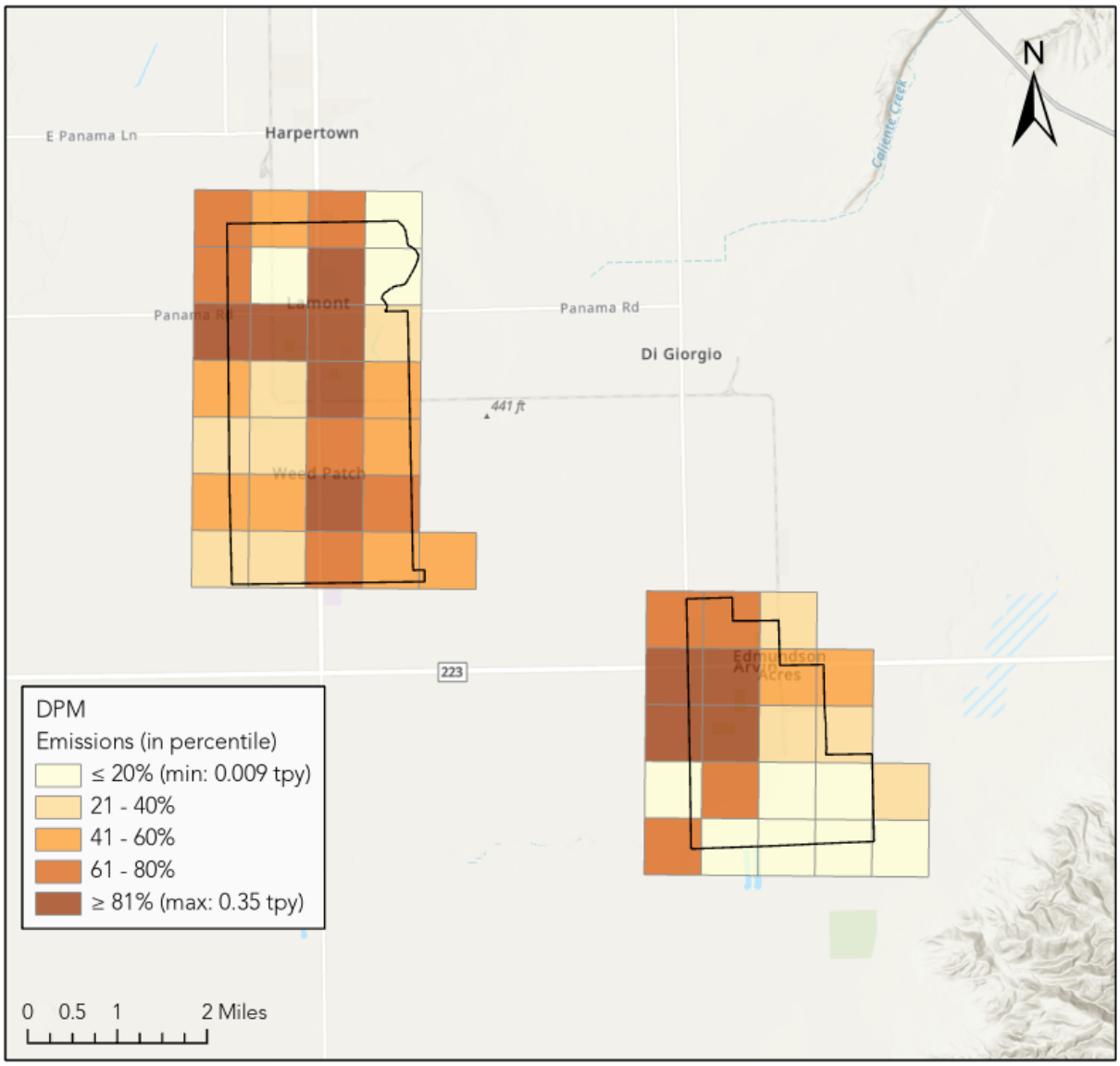


Table E.b.4. Preliminary Emissions Estimate for the Arvin, Lamont Community (2019 Preliminary Emissions Inventory)

Stationary (tons/year)			Areawide (tons/year)			Mobile (tons/year)		
PM2.5	ROG	DPM	PM2.5	ROG	DPM	PM2.5	ROG	DPM
1.2	24.2	0.2	32.2	105.8	0	11.8	78.8	5.5
% of Community Total								
2.7 %	11.6 %	3.9 %	71.2 %	50.7 %	0.0 %	26.1 %	37.7 %	96.1 %

Table E.b.5. Detailed Preliminary Emissions Inventory for the Arvin, Lamont Community (Emissions in tons per year) [97]

Source Category	NOx	TOG	ROG	SOx	PM_{10}	$PM_{2.5}$	DPM
STATIONARY SOURCES							
Fuel Combustion	**9.80**	**1.49**	**0.90**	**0.17**	**0.64**	**0.63**	**0.23**
Electric Utilities	*0.08*	*0.01*	*0.00*	*0.00*	*0.01*	*0.01*	*0.00*
Oil and Gas Production (Combustion)	*0.07*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Manufacturing and Industrial	*1.34*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Food and Agricultural Processing	*4.82*	*0.70*	*0.56*	*0.07*	*0.33*	*0.32*	*0.21*
Service and Commercial	*3.08*	*0.77*	*0.33*	*0.10*	*0.31*	*0.30*	*0.01*
Other (Fuel Combustion)	*0.41*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Cleaning and Surface Coatings	**0.00**	**13.22**	**11.97**	**0.00**	**0.02**	**0.02**	**0.00**
Degreasing	*0.00*	*4.96*	*4.01*	*0.00*	*0.00*	*0.00*	*0.00*
Coatings and Related Process Solvents	*0.00*	*6.73*	*6.59*	*0.00*	*0.02*	*0.02*	*0.00*
Adhesives and Sealants	*0.00*	*1.53*	*1.38*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Production and Marketing	**0.12**	**55.12**	**9.67**	**0.06**	**0.16**	**0.15**	**0.00**
Oil and Gas Production	*0.00*	*3.84*	*1.70*	*0.04*	*0.00*	*0.00*	*0.00*
Petroleum Marketing	*0.11*	*51.19*	*7.91*	*0.02*	*0.16*	*0.15*	*0.00*
Other (Petroleum Production and Marketing)	*0.00*	*0.08*	*0.06*	*0.00*	*0.00*	*0.00*	*0.00*
Industrial Processes	**0.00**	**1.66**	**1.66**	**0.02**	**0.59**	**0.41**	**0.00**
Chemical	*0.00*	*0.71*	*0.71*	*0.00*	*0.00*	*0.00*	*0.00*
Food and Agriculture	*0.00*	*0.95*	*0.95*	*0.02*	*0.00*	*0.00*	*0.00*
Mineral Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Wood and Paper	*0.00*	*0.00*	*0.00*	*0.00*	*0.59*	*0.41*	*0.00*
Other (Industrial Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Stationary Sources	**9.9**	**71.5**	**24.2**	**0.3**	**1.4**	**1.2**	**0.2**

[97] For more details on source categories and associated activities (emission inventory codes), see documentation at https://ww2.arb.ca.gov/emission-inventory-documentation
NOx: nitrogen oxides; TOG: total organic gases; ROG: reactive organic gases; SOx: sulfur oxides; PM_{10}: particulate matter 10 microns or smaller; $PM_{2.5}$: particulate matter 2.5 microns or smaller; DPM: diesel particulate matter

Table E.b.2. Detailed Preliminary Emissions Inventory for Arvin, Lamont Community (Continued) (Emissions in tons per year)

Source Category	NOx	TOG	ROG	SOx	PM_{10}	$PM_{2.5}$	DPM
AREAWIDE SOURCES							
Solvent Evaporation	***0.00***	***93.24***	***82.87***	***0.00***	***0.00***	***0.00***	***0.00***
Consumer Products	*0.00*	*53.27*	*44.70*	*0.00*	*0.00*	*0.00*	*0.00*
Architectural Coatings and Related Process Solvents	*0.00*	*28.53*	*26.74*	*0.00*	*0.00*	*0.00*	*0.00*
Pesticides/Fertilizers	*0.00*	*11.43*	*11.43*	*0.00*	*0.00*	*0.00*	*0.00*
Miscellaneous Processes	***12.24***	***237.84***	***22.91***	***0.36***	***135.42***	***32.15***	***0.00***
Residential Fuel Combustion	*12.19*	*5.64*	*2.54*	*0.36*	*2.68*	*2.62*	*0.00*
Farming Operations	*0.00*	*226.99*	*18.16*	*0.00*	*44.11*	*6.24*	*0.00*
Construction and Demolition	*0.00*	*0.00*	*0.00*	*0.00*	*12.72*	*1.27*	*0.00*
Paved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*37.25*	*5.62*	*0.00*
Unpaved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*12.56*	*1.25*	*0.00*
Fugitive Windblown Dust	*0.00*	*0.00*	*0.00*	*0.00*	*13.24*	*2.29*	*0.00*
Fires	*0.05*	*0.19*	*0.16*	*0.00*	*0.20*	*0.19*	*0.00*
Managed Burning and Disposal	*0.00*	*0.01*	*0.01*	*0.00*	*0.01*	*0.01*	*0.00*
Cooking	*0.00*	*5.02*	*2.04*	*0.00*	*12.66*	*12.66*	*0.00*
Other (Miscellaneous Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Areawide Sources	**12.2**	**331.1**	**105.8**	**0.4**	**135.4**	**32.2**	**0.0**
ON-ROAD MOBILE SOURCES							
Light Duty Vehicles	23.42	36.14	33.13	0.55	8.20	3.43	0.01
Light Heavy Duty Vehicles	17.61	4.10	3.76	0.08	1.05	0.53	0.18
Medium Duty Vehicles	10.20	11.65	10.75	0.21	2.18	0.91	0.01
Medium Heavy Duty Vehicles	27.80	2.69	2.35	0.07	1.66	1.12	0.80
Heavy Heavy Duty Vehicles	149.77	7.41	6.43	0.43	5.39	3.48	2.59
Bus	3.97	1.69	0.29	0.01	0.35	0.17	0.04
Total On-road Mobile Sources	**232.8**	**63.7**	**56.7**	**1.4**	**18.8**	**9.6**	**3.6**
OTHER MOBILE SOURCES							
Aircraft	0.07	0.00	0.00	0.01	0.00	0.00	0.00
Trains	0.81	0.00	0.00	0.00	0.01	0.01	0.01
Recreational Boats	0.00	1.57	1.49	0.00	0.00	0.00	0.00
Off-Road Recreational Vehicles	0.02	3.13	3.11	0.00	0.01	0.01	0.00
Off-Road Equipment	15.35	11.56	10.85	0.02	0.96	0.92	0.59
Farm Equipment	21.27	3.97	3.53	0.00	1.29	1.24	1.27
Fuel Storage and Handling	0.00	3.12	3.12	0.00	0.00	0.00	0.00
Total Other Mobile Sources	**37.5**	**23.4**	**22.1**	**0.0**	**2.3**	**2.2**	**1.9**
Total Community Emissions	**292**	**490**	**209**	**2**	**158**	**45**	**6**

c. South Los Angeles Community Preliminary Emissions Inventory

Figure E.c.1. 1 km x 1 km Grids Used to Develop the South Los Angeles Community Preliminary Emissions Inventory

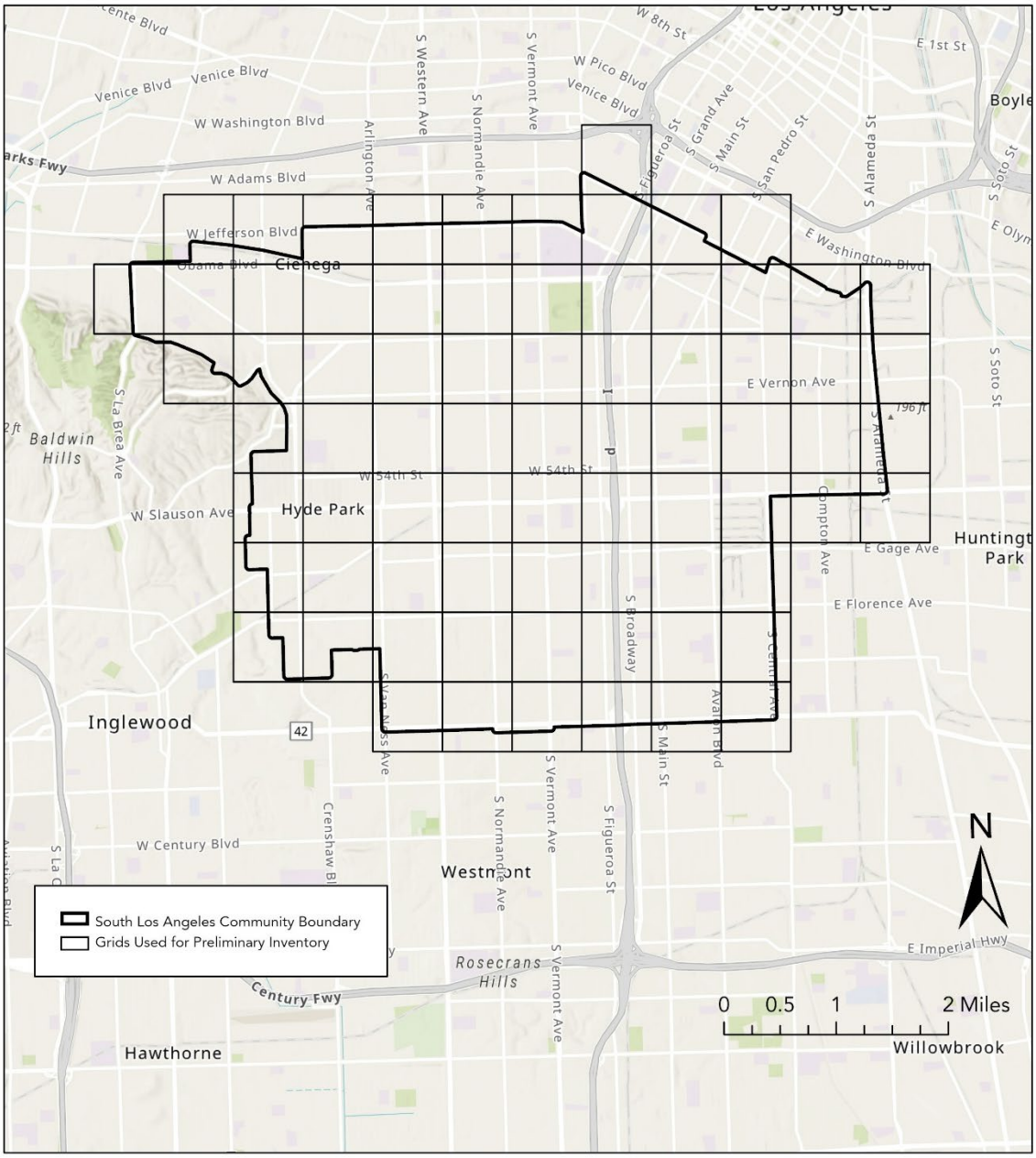


Figure E.c.9. Proposed South Los Angeles Community PM2.5 Emissions (2019 Preliminary Emissions Inventory)

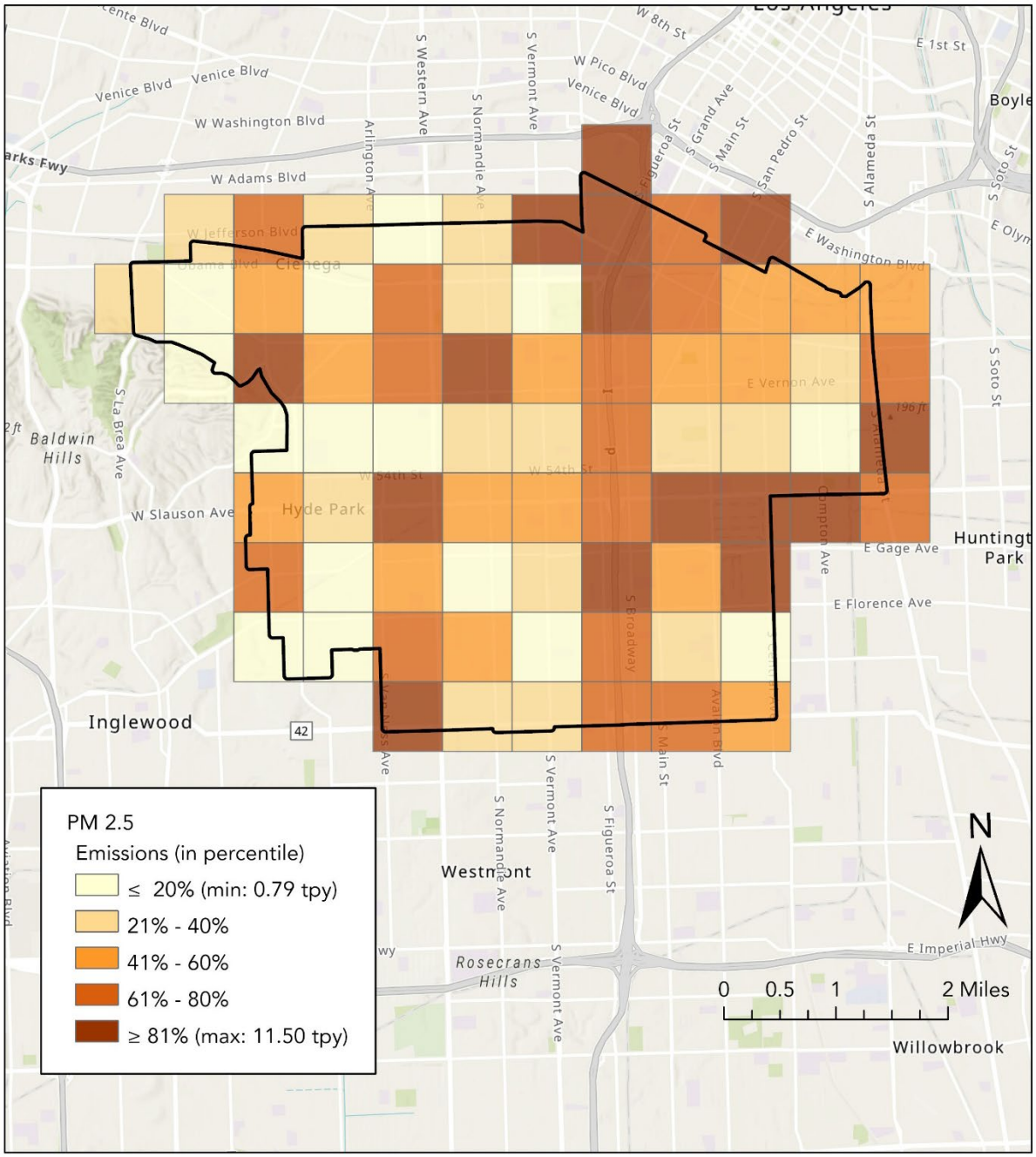


Figure E.c.10. Proposed South Los Angeles Community ROG Emissions (2019 Preliminary Emissions Inventory)

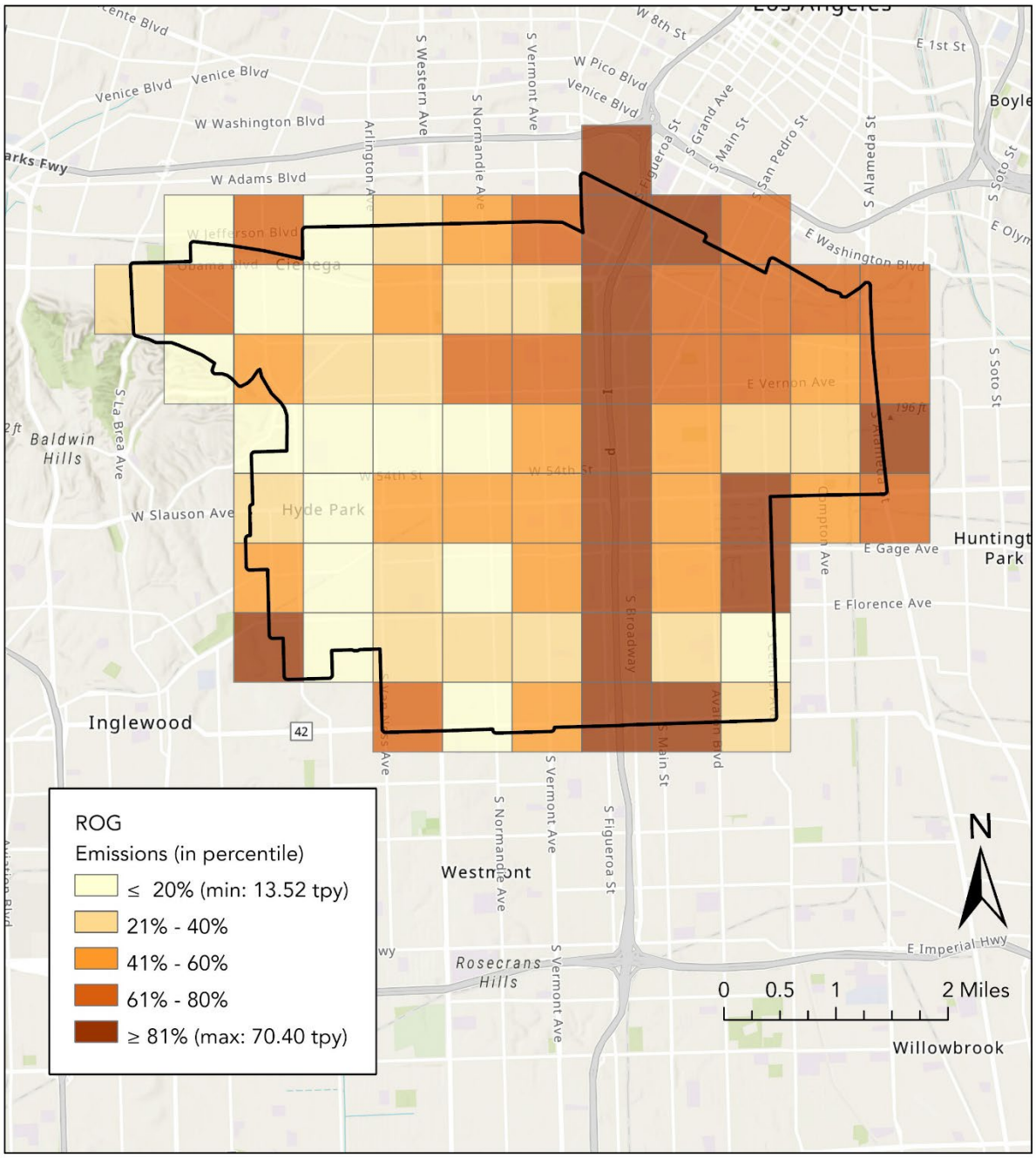


Figure E.c.11. Proposed South Los Angeles Community Diesel PM Emissions (2019 Preliminary Emissions Inventory)

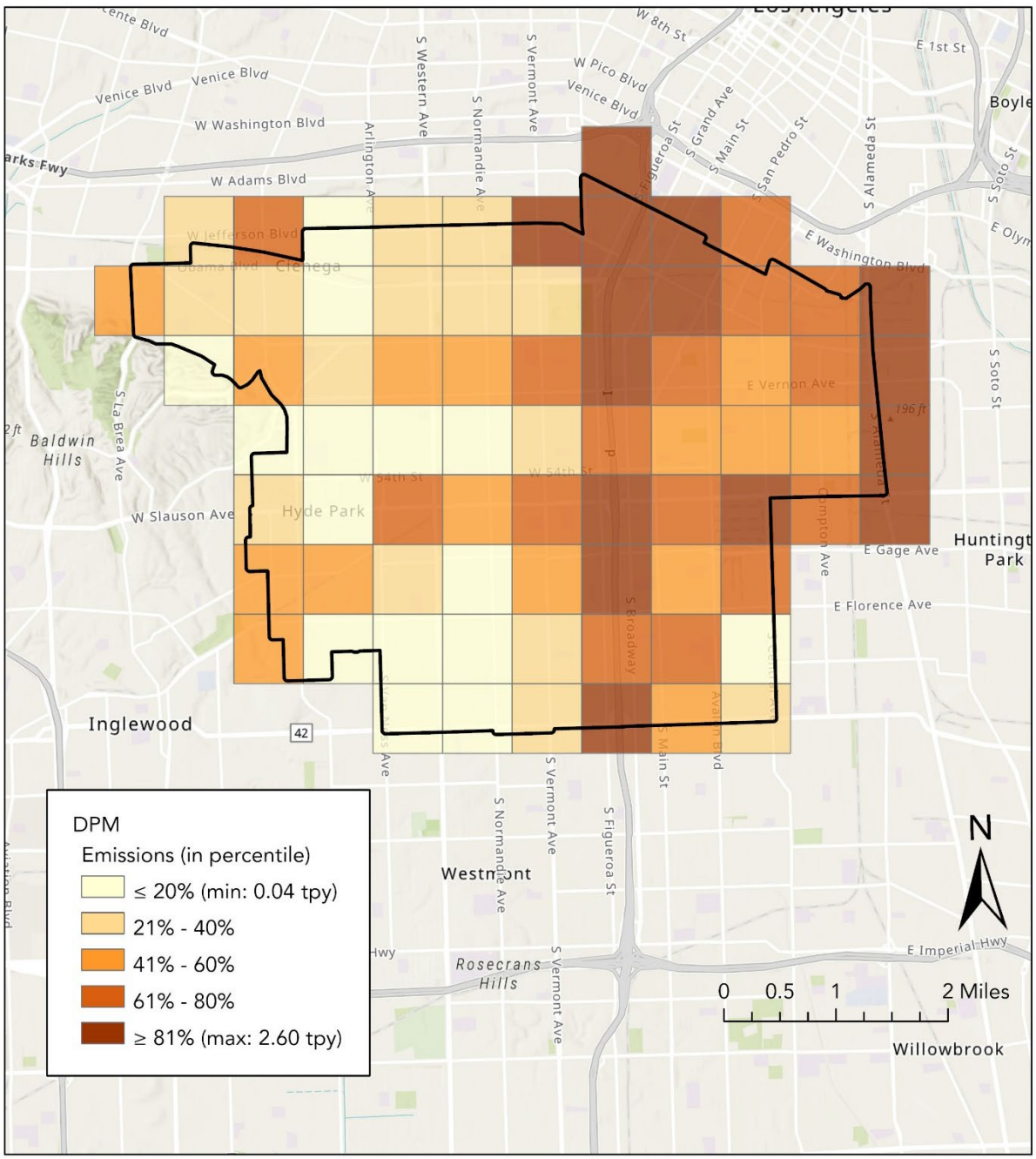


Table E.c.6. Preliminary Emissions Estimate for the South Los Angeles Community (2019 Preliminary Emissions Inventory)

Stationary (tons/year)			Areawide (tons/year)			Mobile (tons/year)		
PM2.5	ROG	DPM	PM2.5	ROG	DPM	PM2.5	ROG	DPM
56	516	0.4	140	1,017	0.0	78	774	12
% of Community Total								
20.3 %	22.3 %	2.9 %	51.0 %	44.1 %	0.0 %	28.6 %	33.6 %	97.1 %

Table E.c.7. Detailed Preliminary Emissions Inventory for the South Los Angeles Community (2019 Emissions in tons per year) [98]

Source Category	NOx	TOG	ROG	SOx	PM_{10}	$PM_{2.5}$	DPM
STATIONARY SOURCES							
Fuel Combustion	**182.57**	**358.39**	**64.63**	**17.97**	**15.26**	**15.11**	**0.35**
Cogeneration	*0.00*	*0.00*	*0.00*	*0.00*	*0.06*	*0.04*	*0.00*
Oil and Gas Production (Combustion)	*0.11*	*0.06*	*0.05*	*0.00*	*0.02*	*0.02*	*0.00*
Manufacturing and Industrial	*100.12*	*310.04*	*42.56*	*15.53*	*8.23*	*8.21*	*0.00*
Service and Commercial	*59.24*	*46.77*	*20.85*	*2.37*	*6.45*	*6.44*	*0.07*
Other (Fuel Combustion)	*23.10*	*1.51*	*1.17*	*0.07*	*0.49*	*0.40*	*0.28*
Waste Disposal	**3.12**	**745.42**	**59.72**	**0.02**	**0.18**	**0.18**	**0.00**
Incinerators	*3.12*	*0.99*	*0.17*	*0.02*	*0.18*	*0.18*	*0.00*
Other (Waste Disposal)	*0.00*	*744.42*	*59.56*	*0.00*	*0.00*	*0.00*	*0.00*
Cleaning and Surface Coatings	**0.00**	**769.40**	**266.45**	**0.00**	**7.23**	**6.96**	**0.00**
Laundering	*0.00*	*21.75*	*1.16*	*0.00*	*0.00*	*0.00*	*0.00*
Degreasing	*0.00*	*588.17*	*112.39*	*0.00*	*0.00*	*0.00*	*0.00*
Coatings and Related Process Solvents	*0.00*	*129.71*	*126.07*	*0.00*	*7.22*	*6.95*	*0.00*
Printing	*0.00*	*0.88*	*0.88*	*0.00*	*0.00*	*0.00*	*0.00*
Adhesives and Sealants	*0.00*	*23.23*	*20.28*	*0.00*	*0.01*	*0.01*	*0.00*
Other (Cleaning and Surface Coatings)	*0.00*	*5.67*	*5.67*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Production and Marketing	**0.01**	**188.77**	**69.49**	**0.16**	**0.00**	**0.00**	**0.00**
Oil and Gas Production	*0.01*	*11.22*	*4.85*	*0.16*	*0.00*	*0.00*	*0.00*
Petroleum Marketing	*0.00*	*177.55*	*64.64*	*0.00*	*0.00*	*0.00*	*0.00*
Industrial Processes	**0.00**	**67.06**	**56.12**	**0.00**	**53.93**	**33.42**	**0.00**
Chemical	*0.00*	*47.41*	*36.82*	*0.00*	*0.60*	*0.60*	*0.00*
Food and Agriculture	*0.00*	*1.50*	*1.50*	*0.00*	*0.00*	*0.00*	*0.00*
Mineral Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.02*	*0.02*	*0.00*
Metal Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.24*	*0.14*	*0.00*
Wood and Paper	*0.00*	*0.00*	*0.00*	*0.00*	*50.73*	*30.44*	*0.00*
Other (Industrial Processes)	*0.00*	*18.16*	*17.80*	*0.00*	*2.34*	*2.22*	*0.00*
Total Stationary Sources	**185.7**	**2,129.0**	**516.4**	**18.1**	**76.6**	**55.7**	**0.4**

[98] For more details on source categories and associated activities (emission inventory codes), see documentation at https://ww2.arb.ca.gov/emission-inventory-documentation
NOx: nitrogen oxides; TOG: total organic gases; ROG: reactive organic gases; SOx: sulfur oxides; PM_{10}: particulate matter 10 microns or smaller; $PM_{2.5}$: particulate matter 2.5 microns or smaller; DPM: diesel particulate matter

Table E.c.2. Detailed Preliminary Emissions Inventory for South Los Angeles (Continued) (Emissions in tons per year)

Source Category	NOx	TOG	ROG	SOx	PM_{10}	$PM_{2.5}$	DPM
AREAWIDE SOURCES							
Solvent Evaporation	**0.00**	**1140.06**	**962.47**	**0.00**	**0.00**	**0.00**	**0.00**
Consumer Products	*0.00*	*1012.21*	*841.84*	*0.00*	*0.00*	*0.00*	*0.00*
Architectural Coatings and Related Process Solvents	*0.00*	*121.32*	*114.10*	*0.00*	*0.00*	*0.00*	*0.00*
Pesticides/Fertilizers	*0.00*	*6.52*	*6.52*	*0.00*	*0.00*	*0.00*	*0.00*
Miscellaneous Processes	**131.84**	**119.82**	**54.19**	**3.46**	**330.03**	**139.79**	**0.00**
Residential Fuel Combustion	*131.11*	*100.75*	*45.47*	*3.46*	*39.73*	*38.82*	*0.00*
Construction and Demolition	*0.00*	*0.00*	*0.00*	*0.00*	*69.67*	*6.98*	*0.00*
Paved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*148.59*	*22.43*	*0.00*
Unpaved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.35*	*0.03*	*0.00*
Fugitive Windblown Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.01*	*0.00*	*0.00*
Fires	*0.72*	*2.78*	*2.39*	*0.00*	*2.72*	*2.55*	*0.00*
Cooking	*0.00*	*16.29*	*6.33*	*0.00*	*68.96*	*68.96*	*0.00*
Total Areawide Sources	**131.8**	**1,259.9**	**1,016.7**	**3.5**	**330.0**	**139.8**	**0.0**
ON-ROAD MOBILE SOURCES							
Light Duty Vehicles	279.26	360.71	398.92	7.01	105.57	44.57	0.22
Light Heavy Duty Vehicles	40.34	13.15	14.01	0.24	3.39	1.55	0.26
Medium Duty Vehicles	79.61	75.41	83.40	1.51	15.65	6.65	0.04
Medium Heavy Duty Vehicles	70.38	4.83	5.52	0.23	4.84	3.03	1.90
Heavy Heavy Duty Vehicles	79.42	2.81	3.58	0.21	2.58	1.63	1.18
Bus	77.62	7.52	83.53	0.27	6.16	3.00	0.83
Total On-road Mobile Sources	**626.6**	**464.4**	**589.0**	**9.5**	**138.2**	**60.4**	**4.4**
OTHER MOBILE SOURCES							
Trains	35.61	1.13	0.99	0.04	0.59	0.54	0.59
Off-Road Recreational Vehicles	0.00	4.37	4.36	0.00	0.00	0.00	0.00
Off-Road Equipment	223.98	264.80	247.21	0.47	18.15	17.40	7.02
Fuel Storage and Handling	0.00	57.06	57.06	0.00	0.00	0.00	0.00
Total Other Mobile Sources	**259.6**	**327.4**	**309.6**	**0.5**	**18.7**	**17.9**	**7.6**
Total Community Emissions	**1,204**	**4,181**	**2,432**	**32**	**564**	**274**	**12**

Appendix F
CalEnviroScreen 3.0 PM2.5 Estimates

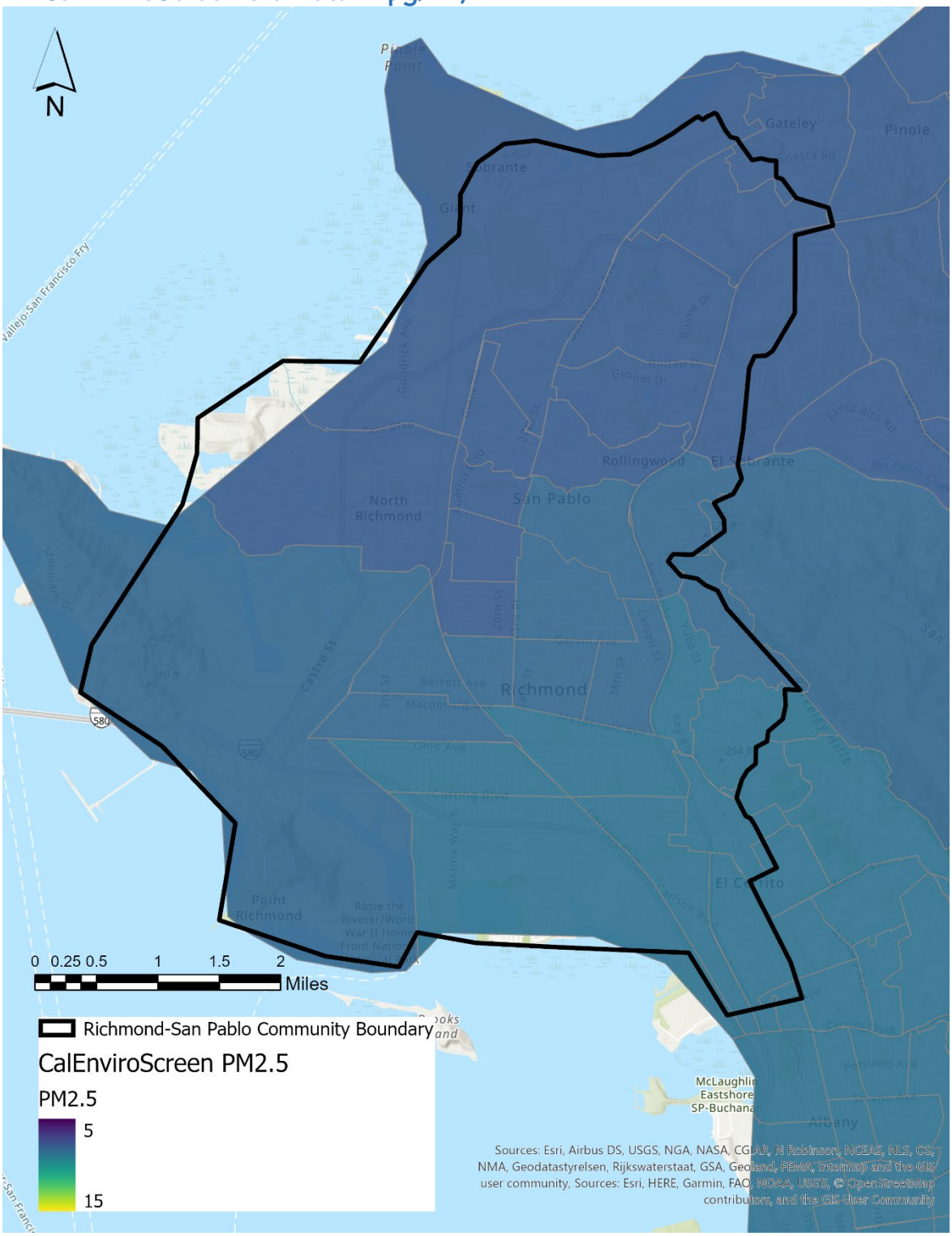
Ground-based air quality monitoring stations can measure PM2.5 concentrations and compositions with high degree of accuracy. However, these air quality stations are available in a limited number of locations.

In order to estimate the spatial variability of PM2.5 concentrations for the entire community, publically available data was used to understand how the air pollution is spread throughout the community. CalEnviroScreen 3.0 evaluates PM2.5 by extracting quarterly average values from the air monitors for 2012-2014 and averages them across the three years. An estimate of the PM2.5 concentrations for each census tract within 50 km of an air monitoring station was generated using air monitoring data. If an air monitor is not present within 50 km from the centroid of a census tract, satellite observations will be used to estimate the PM2.5 concentrations.[99]

Figure F -1 for Richmond-San Pablo Community, Figure F – 2 for Arvin Lamont Community, and Figure F – 3 for the South Los Angeles Community shows the CalEnviroScreen 3.0 PM2.5 levels. As mentioned earlier, a more refined approach using air quality measurements and community scale inventory will be utilized to identify sources of concern and their estimated emissions in each community if the community is selected by the CARB Board.

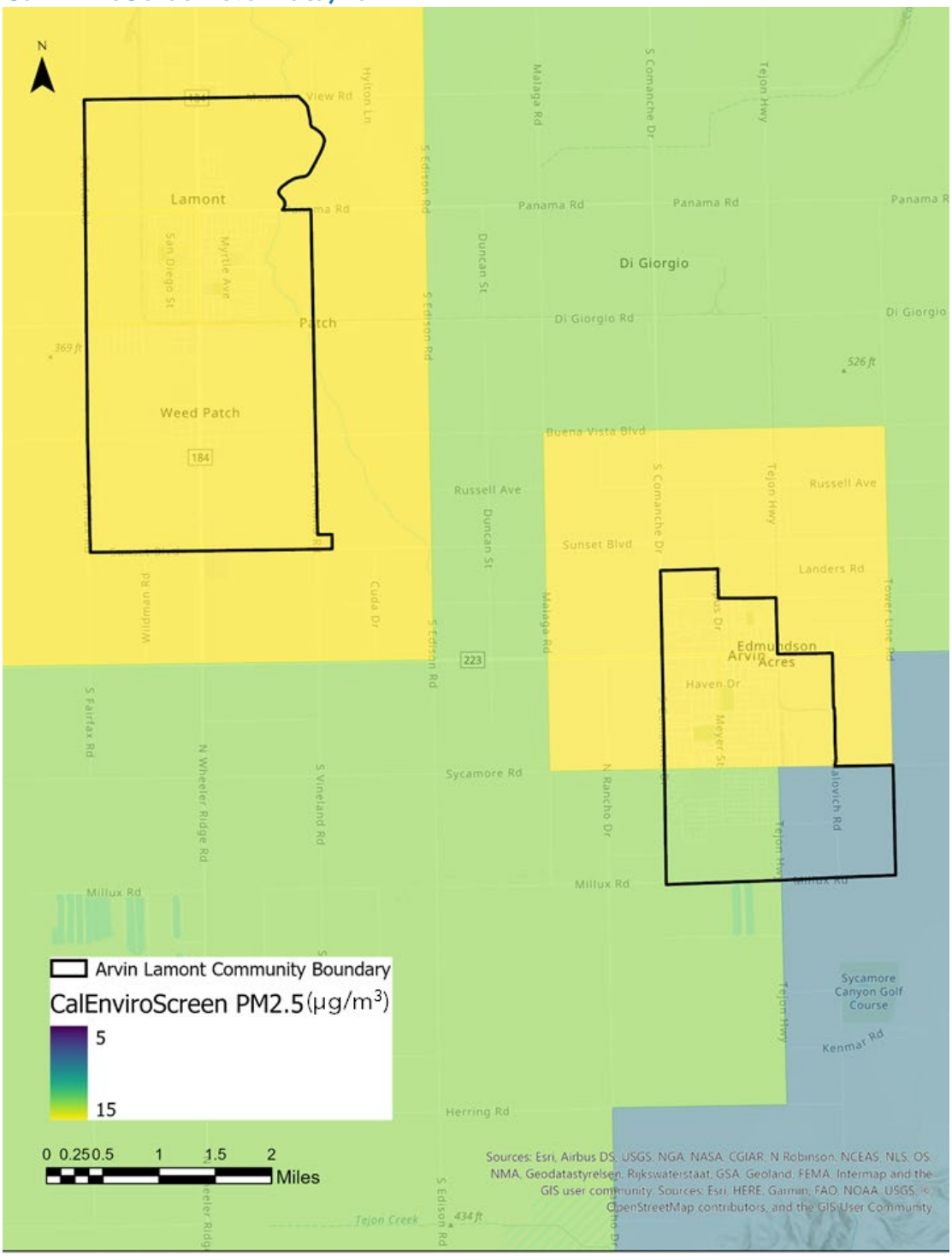
[99] More information on CalEnviroScreen 3.0 PM2.5 Concentrations. Available at: https://oehha.ca.gov/calenviroscreen/indicator/air-quality-pm25

Figure F-1. Annual PM2.5 Concentration for Richmond-San Pablo Community (2018 CalEnviroScreen 3.0 Data in µg/m³)[100]



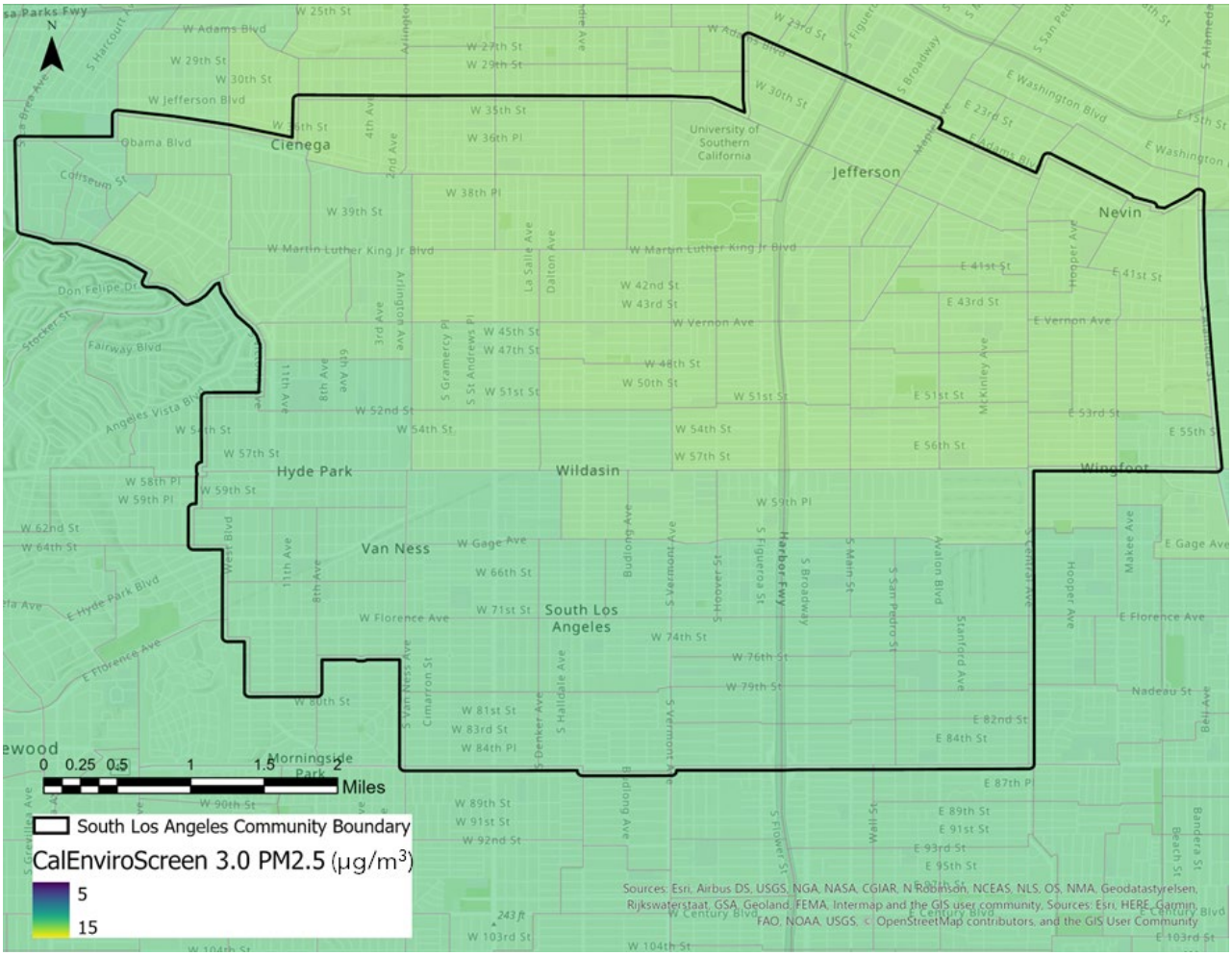
[100] https://oehha.ca.gov/calenviroscreen/indicator/air-quality-pm25. Data source: https://oehha.ca.gov/media/downloads/calenviroscreen/document/ces3gdb.zip

Figure F-2. Annual PM2.5 Concentration for Arvin, Lamont Community (2018 CalEnviroScreen 3.0 Data)[101]



[101] https://oehha.ca.gov/calenviroscreen/indicator/air-quality-pm25. Data source: https://oehha.ca.gov/media/downloads/calenviroscreen/document/ces3gdb.zip

Figure F-2. Annual PM2.5 Concentration for South Los Angeles Community (2018 CalEnviroScreen 3.0 Data)[102]



[102] https://oehha.ca.gov/calenviroscreen/indicator/air-quality-pm25. Data source: https://oehha.ca.gov/media/downloads/calenviroscreen/document/ces3gdb.zip

Attachment B
List of Staff Community Recommendations

Table 1 identifies staff community recommendations for deployment of air monitoring and/or development of community emissions reduction programs.

Table 1. 2020 Community Recommendations

Community (Air District)	**Action**	**Key Sources**	**Rationale**
Richmond-San Pablo (Bay Area)	Transition to developing a Community Emissions Reduction Program	Freeways Industry Port Rail Refinery Urban	Consistent with CARB Board direction to place priority on moving monitoring programs to emissions reduction programs. This transition is supported by the community steering committee and Air District Board.
Arvin, Lamont (San Joaquin Valley)	Develop a Community Air Monitoring Plan and Emissions Reduction Program	Agriculture Rural Warehouses	Consistent with CARB Board direction to prioritize communities recommended by community based organizations in previous years but not selected. Nominated this year and in 2019 by Air District Board with strong support from community based organizations.
South Los Angeles (South Coast)	Develop a Community Air Monitoring Plan and Emissions Reduction Program	Freeways Industry Oil & Gas Urban	Consistent with CARB Board direction to prioritize communities recommended by community based organizations in previous years but not selected. Nominated by Air District Board with strong support from community based organizations.

The *2020 Community Recommendations Staff Report* is available at: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program-ab-617.