DRAFT
ARVIN/LAMONT COMMUNITY EMISSIONS REDUCTION PROGRAM

Arvin/Lamont AB 617 Community Steering Committee
San Joaquin Valley Air Pollution Control District

May 24~~18~~, 2022

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1. INTRODUCTION

1.1. IMPLEMENTATION OF AB 617 IN ARVIN/LAMONT AB 617 COMMUNITY

The implementation of Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes of 2017) has brought additional clean air resources and strategies to Valley environmental justice communities that have been and are currently disproportionately burdened by socioeconomic disadvantages and air pollution, despite significant emissions reductions that have already been achieved regionally.

AB 617 provides mechanisms and resources to adopt expedited schedules for the implementation of advanced control technologies for existing stationary source facilities; increased stringency of reporting requirements for stationary sources; develop and implement community-specific air quality monitoring networks; implement, and track localized emission reduction programs; improve availability of data and other technical information; and invest substantial funding in the community through voluntary incentive funding measures.

Resources available through this legislation allowed the San Joaquin Valley Air Pollution Control District (District), working in partnership with the Arvin/Lamont AB 617 Community Steering Committee (CSC), through a comprehensive public outreach and community engagement process, to expand regional programs for community protection and develop a robust plan for reducing local exposure to various forms of air pollution including fine particulate matter and toxic air contaminants in the Arvin/Lamont AB 617 Community.

Several requirements of AB 617 will serve to reduce air pollution in disadvantaged communities throughout the San Joaquin Valley. AB 617 legislation required districts that are in nonattainment for one or more air pollutants to adopt expedited rule review schedules, by January 2019, for the implementation of Best Available Retrofit Control Technology (BARCT). The District Governing Board adopted this schedule at a public hearing held in December 2018, which set the path forward for the District to research and potentially amend applicable rules. The expedited BARCT implementation schedule is discussed in more detail later in this document.

Additionally, AB 617 requires "Stationary Sources" as defined by CARB to report their criteria pollutant emissions inventory as well as their air toxics emissions inventory to the State on an annual basis. These emissions inventories will be presented via the Criteria Pollutant and Toxics Emissions Reporting regulation, once fully implemented by California Air Resources Board (CARB).

The District has worked with closely with CARB, regulated entities, and other stakeholders to implement this new reporting requirement in the Valley. Further information on the implementation of the AB 617 stationary source criteria pollutant emissions inventory reporting requirement is available at: https://ww2.arb.ca.gov/our-work/programs/criteria-and-toxics-reporting.

COMMUNITY SELECTION

The District's community identification and prioritization analysis for the third year of AB 617 implementation was based on extensive air quality analysis, numerous health indicators from the state's CalEnviroScreen model (version 3.0), and various other socioeconomic indicators. In developing San Joaquin Valley community recommendations for additional clean air resources and public engagement under AB 617, the District conducted a public engagement process to seek input from Valley residents, businesses, agencies, and other stakeholders through public workshops and meetings throughout the Valley.

Based on this extensive public engagement effort, significant interest and support for the Arvin/Lamont community, and the District's comprehensive identification and prioritization analysis: the Arvin/Lamont Community was recommended by the District Governing Board as a third-year AB 617 community. The City of Arvin and nearby Lamont are part of a small, rural community in Southeast Kern County, and have long been recognized as one of the most air quality impacted areas of the Valley. A number of heavily trafficked highways pass nearby, including Hwy 184 and Hwy 223, contributing to overall emissions in the community. The community is also surrounded by agricultural operations, industrial sources, and emissions traveling downwind from the City of Bakersfield to the northwest. The Arvin/Lamont community was ultimately selected by the CARB Governing Board in February 2021 for the development of a community air monitoring plan and an emissions reduction program designed to reduce pollution impacts in the selected community.

The District community recommendation for CARB under the third-year of AB 617 implementation can be found here: https://www.valleyair.org/Board_meetings/GB/agenda_minutes/Agenda/2020/September/final/08.pdf

COMMUNITY STEERING COMMITTEE OBJECTIVES

In accordance with the community-driven nature of AB 617 directives, staff worked to convene a CSC under a set of guiding principles set forth by the District's Governing Board. The Arvin/Lamont CSC is comprised of residents, businesses, community based organizations, environmental justice advocates, and public agencies, working together to craft and develop a community air monitoring plan and this Community Emissions Reduction Program (CERP). To ensure successful implementation of AB 617, residents, businesses, non-profits organizations, state and local agencies, and other stakeholders from all sectors within the selected community were involved in the development of CERP.

COMMUNITY AIR MONITORING PLAN

The District worked closely with the Arvin/Lamont CSC to draft a community air monitoring plan. The community-specific air monitoring network, as developed in consultation with the CSC, will provide an expanded monitoring capacity designed to

provide scalable, portable, and rapidly deployable air monitoring equipment to the community. This includes a combination of air monitoring platforms equipped with highly specialized analyzers capable of monitoring a full range of criteria and toxic pollutants. Various monitoring platforms include larger air monitoring trailers, mobile air monitoring vans, and compact air monitoring sensors. Monitoring data from these sensors will be made available to members of the public in real-time on the Arvin/Lamont AB 617 webpage.

COMMUNITY EMISSIONS REDUCTION PROGRAM

The Arvin/Lamont Community Steering Committee has developed this Community Emissions Reduction Program (CERP), in partnership with CARB, residents, affected sources, and local government bodies in the affected community. Steering Committee input and other comments received from the public in the community have provided instrumental information, critical to implementing community-specific measures and addressing community concerns. Strong collaboration between community members, the District, CARB, and other local agencies has resulted in the development of an ambitious plan for reducing localized pollution and associated health impacts in the Arvin/Lamont AB 617 Community.

This CERP provides a description of the Arvin/Lamont AB 617 Community, including geographical boundaries and socioeconomic factors impacting community residents. A technical analysis describes the sources of pollution impacting the community, as well as the location of sensitive receptors within the community. Sources of pollution that are of particular concern to community members are highlighted, and possible strategies for reducing pollution impacts from these sources are evaluated. The strategies that were ultimately selected by the CSC for implementation in the community include incentive funding measures, public engagement strategies, enforcement strategies, regulatory strategies, and strategies that will be completed in partnership with other agencies and local organizations. Finally, an implementation schedule and metrics for tracking emission reductions in both annual and five-year milestone reports are discussed in detail.

1.2. HEALTH BASED AIR QUALITY OBJECTIVES

CERPs implemented under AB 617 are designed to reduce emissions of pollutants that have been shown to have adverse impacts on public health, including fine particulate matter and toxic air contaminants. As specified in CARB's Community Air Protection Program Blueprint, Appendix C: Criteria for Community Emissions Reduction Programs (https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018_appendix_c.pdf), this plan will focus on reducing individual criteria air pollutant and toxic air contaminant emissions to address the impacts of community exposure to multiple pollutants. While each community faces distinct health-based challenges, CARB guidance states that broad health-based air quality objectives provide a consistent foundation for determining the appropriate levels of emissions reductions for CERPs statewide.

The U.S. Environmental Protection Agency and the State of California have established ambient air quality standards, which set health-protective levels for the following criteria pollutants: ozone, particulate matter with a diameter of 10 microns or smaller (PM10), particulate matter with a diameter of 2.5 microns or smaller (PM2.5), carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. California also has standards for sulfates, vinyl chloride, and hydrogen sulfide. Due to the region's topography and meteorology, the Valley is classified as Serious nonattainment for the federal PM2.5 standards, and Extreme nonattainment for federal ozone standards.

Particulate Matter: Particulate matter is a mixture of solid particles and liquid droplets in the air. PM can be emitted directly into the atmosphere (primary PM), or can form as secondary particulates in the atmosphere through the photochemical reactions of precursors (when precursors are energized by sunlight). Thus, PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. PM10 is particulate matter that is 10 microns or less in diameter, and the PM2.5 subset includes smaller particles that are 2.5 microns or less in diameter.

Any particles 10 microns or less are considered respirable, meaning they can be inhaled into the body through the mouth or nose. PM10 can generally pass through the nose and throat and enter the lungs. PM2.5, which is the portion of PM10 that is less than 2.5 microns in size, when inhaled can move deep into the gas exchange tissues of the lungs, where it can be absorbed into the bloodstream and carried to other parts of the body. The potential health impacts of particle pollution are linked to the size of the particles, with the smaller particles having larger impacts. Numerous studies link PM2.5 to a variety of health problems, including aggravated asthma, increased respiratory symptoms (irritation of the airways, coughing, difficulty breathing), decreased lung function in children, development of chronic bronchitis, irregular heartbeat, non-fatal heart attacks, increased respiratory and cardiovascular hospitalizations, lung cancer, and premature death. Children, older adults, and individuals with heart or lung diseases are the most likely to be affected by PM2.5.

Many studies have quantified and documented the health benefits of attaining the U.S. Environmental Protection Agency (EPA) air quality standards for PM. The Valley Air Basin is in attainment of the federal standards for PM10, but is currently classified as Serious nonattainment for the federal PM2.5 standards. The District, in partnership with CARB, developed the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards,* which was approved by EPA on June 30, 2020 and details strategies to move the region towards attainment of the federal PM2.5 standards. More information is available at: http://valleyair.org/pmplans. The plan is also discussed in further detail in Chapter 3.

Ozone: Ozone is a regional air pollutant that is formed through complex chemical reactions in the atmosphere. In contrast, PM2.5 concentrations are the result of both local and regional emissions, and reducing localized emissions of PM2.5 can reduce disparities in exposure experienced in communities with high cumulative exposure burdens. CARB Office of Community Air Protection guidance states that, because ozone formation is driven by regional rather than localized source contributions, ozone

should be addressed in regional air quality improvement efforts through the State Implementation Plan. Therefore, ozone and related precursors have not been addressed as a part of this CERP development. The District's current plan for attainment of health-based ozone standards throughout the San Joaquin Valley Air Basin can be found here: http://valleyair.org/Air_Quality_Plans/Ozone_Plans.htm

Toxic air contaminants: Toxic air contaminants (TACs) also contribute to a community's cumulative exposure burden. Exposure to TACs can increase the risk of acute and chronic health impacts as well as cancer. Diesel particulate matter is a large concern in areas with high exposure to diesel engine emissions, such as the community of Arvin/Lamont AB 617 Community. Other toxic air contaminants can contribute to localized health risks, including metals; air toxics related to fossil fuel production, such as benzene and toluene; and compounds associated with combustion, including polycyclic aromatic hydrocarbons and dioxins. The California Office of Environmental Health Hazard Assessment (OEHHA) establishes threshold concentrations for toxic air contaminants at which exposure is not expected to trigger non-cancer health effects. For carcinogens, OEHHA guidance states that there are no safe exposure thresholds. Reducing emissions in the community will be based on identifying technologies and practices that offer the maximum level of toxic air contaminant emissions reductions achievable to address both types of health effects

With the support of community members, this CERP will build upon regional efforts to improve air quality throughout the Valley Air Basin. The Arvin/Lamont AB 617 Community CERP focuses on reducing emissions of and exposure to PM2.5 and toxic air contaminants from localized sources that contribute to cumulative exposure burdens within the community. Pollution reduction strategies, targets, goals, and metrics included in this CERP have been developed in accordance with these health-based air quality objectives and are presented in more detail in Chapter 4 of this document.

2. COMMUNITY PARTNERSHIPS AND PUBLIC ENGAGEMENT

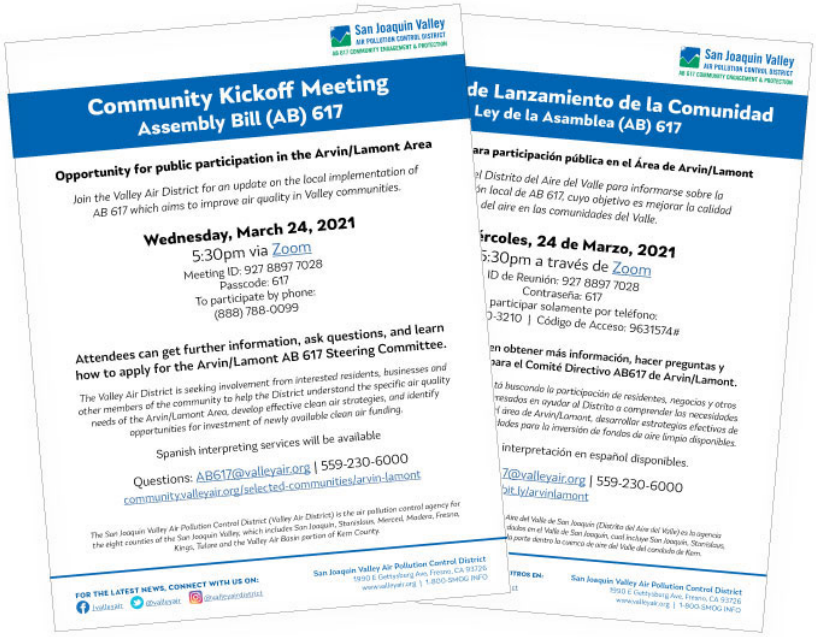
Meaningful community engagement, significant outreach and a robust public process have guided the development of this Community Emissions Reduction Program (CERP). Key features of these efforts undertaken by the Community Steering Committee and the District include:

- District hosted kick-off meeting to solicit feedback on conducting initial public outreach and establishing a Community Steering Committee
- Implemented a "community co-lead" model where community members were nominated and selected by the CSC to help guide the committee and assist with agenda setting, meeting logistics and communication to the resident members
- Held monthly facilitated, bilingual (English and Spanish) virtual meetings (due to ongoing COVID-19 pandemic)
- Live-streamed and recorded all CSC meetings: (https://community.valleyair.org/selected-communities/arvin-lamont/steering-committee-meetings)
- Surveyed needs and resources of the CSC members and worked to provide training and computer technology to assist members in accessing virtual meetings
- Provided bilingual materials via email, mail and the AB 617 community webpage (https://community.valleyair.org/selected-communities/arvin-lamont/)
- Implemented a Resident member stipend program to encourage participation in regular meetings
- Used interactive online survey tools (in both English and Spanish) such as Survey Monkey and Social Pinpoint to encourage active participation and to develop visual aids to share information to the CSC; and
- Shared presentations and information from: the District, CSC members, CARB staff, OEHHA, the California Department of Pesticide Regulation, Central California Environmental Justice Network, the City of Arvin, the County of Kern and the Kern Council of Governments

2.1. COMMUNITY KICKOFF MEETING

In February 2021, District staff conducted multilingual outreach, worked collaboratively with environmental justice organizations, distributed bilingual flyers (Figure 2-1) to local schools, media and agencies and invested approximately $2,000 in social media advertisements targeted at the Arvin/Lamont zip codes to encourage attendance at the official March community kickoff meeting. Additionally, a pre-meeting was held with many local advocacy groups, interested residents, District and CARB staff and others to discuss the approach for the March kickoff meeting and plan for the wide recruitment of CSC resident members. CARB shared the background on the selection of Arvin/Lamont as a community under AB 617 as well as the criteria that would be used by the committee to develop a community air monitoring plan and a community emissions reduction program.

Figure 2-1 Bilingual Community Flyers Distributed



The Community Kickoff Meeting was held virtually, due to the Covid-19 pandemic, through Zoom on Wednesday, March 24, 2021 (Figure 2-2). Approximately 75 people attended the meeting, which was presented in English and Spanish. In addition to information about AB 617, attendees learned about monitoring technology and District incentive programs. Community members were encouraged to apply to be on the Community Steering Committee at the Kickoff meeting, with additional time provided for individuals to apply via email or mail.

In addition, the District distributed bilingual flyers (Figure 2-1) to local media, schools, agencies, and non-profit organizations; and invested in social media advertisements

targeted at the Arvin/Lamont Community zip codes to encourage kickoff meeting participation.

Figure 2-2 Community Kickoff Meeting

2.2. COMMUNITY STEERING COMMITTEE

COMMUNITY STEERING COMMITTEE MAKE-UP

The District received applications from over 80 individuals interested in participating in the Community Steering Committee (CSC). Before a final decision could be made regarding the makeup of CSC membership, the group first had to finalize the boundaries, which would guide who would be eligible for the CSC. Therefore, initial meetings of these interested AB 617 volunteers consisted of formal boundary discussions. The group collectively requested the boundary be expanded to include a larger footprint around Arvin and Lamont.

The final Boundary can be found at https://sjvapcd.maps.arcgis.com/apps/webappviewer/index.html?id=def12eb079854df4b78c9451c6375f1a

In response to boundary expansion, an additional application period was opened and community members within the expanded area were invited to apply. The final committee consists of 52 community residents; 12 individuals representing environmental justice organizations working in the community, health care organizations, educational entities, or businesses within the community; and five non-voting government officials.

In addition to the regular CSC members, several individuals and entities have alternate

members, should they be unable to attend. A full roster of membership is available at https://community.valleyair.org/selected-communities/arvin-lamont/steering-committee-documents

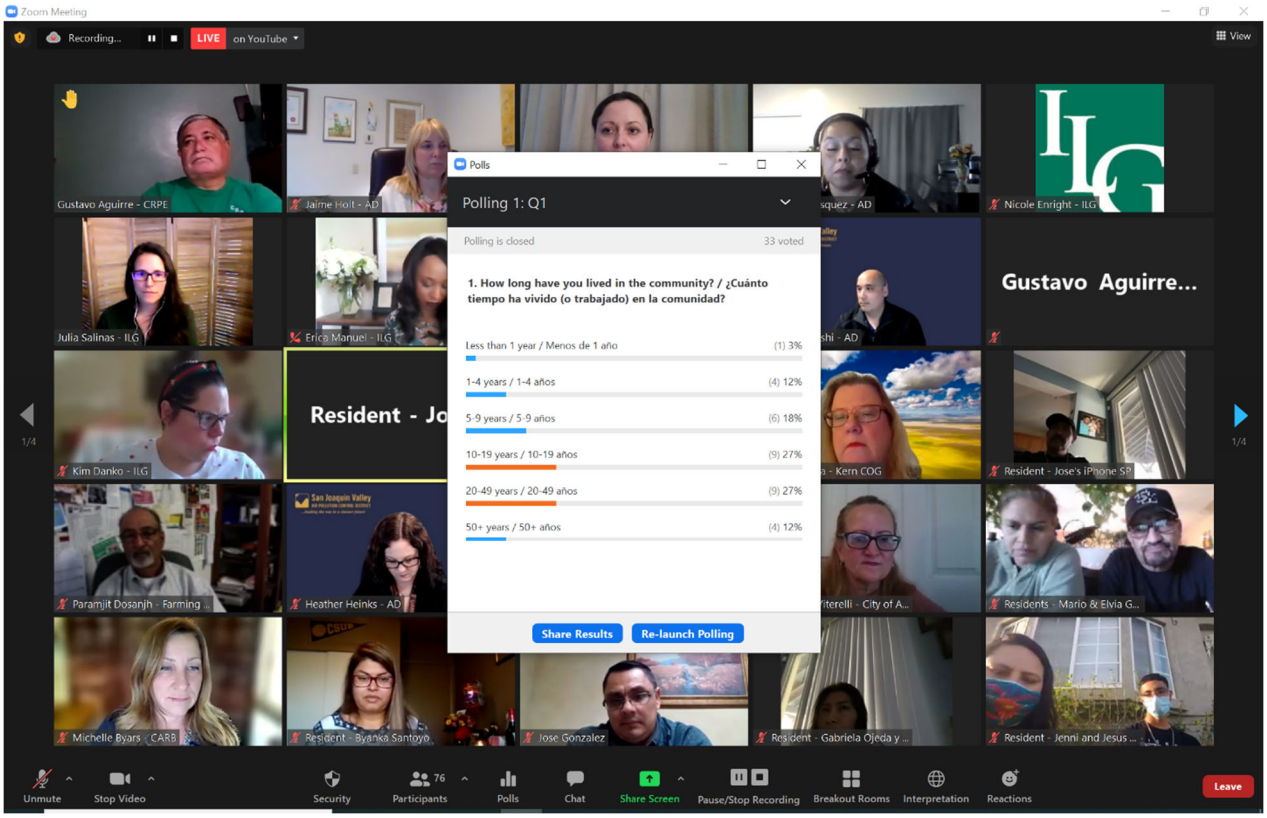
The Arvin/Lamont Community Steering Committee met at least once a month, usually on the fourth Wednesday of the month via Zoom throughout the CERP development process. Community Steering Committee meetings were initially facilitated by the Institute for Local Government (ILG), and following the close of their contract in September 2021, Harder & Co. came on board to facilitate meetings from October 2021 onward.

To ensure full engagement by all CSC members during CERP development, the District assessed language and technology needs by surveying CSC members and determined there was a need to provide Spanish interpretation at each of the meetings. Additionally, the committee identified and selected community resident "co-leads" to help coordinate agendas, communicate to members and guide the discussion. The commitment demonstrated by the District and CSC members to ensure ongoing full and active participation in meetings included:

- Monthly agenda-setting meetings with District, community co-hosts, interested CSC members, CARB staff, and third-party facilitators to collectively set expectations and plan for upcoming CSC meetings
- Real-time interpretation services in all necessary languages
- An Information Session on how to join meetings on Zoom
- Expert presentations from partner agencies such as CARB, OEHHA, County of Kern, District staff, and CSC members
- Comprehensive and dedicated Arvin/Lamont community webpage with tools to view the community boundary, committee charter, meeting agendas, sources of community concern, emissions inventories, and other resources
- Neutral meeting facilitation to ensure meetings are inclusive and neutral by bringing out different points of view and preventing individuals from monopolizing discussions
    - Monthly evening meetings via Zoom, with technical assistance provided to residents and stakeholders upon request
    - Meeting materials posted ahead of meeting
    - Extra meetings to discuss topics or concerns Community Steering Committee members have
    - Provided free laptops and internet connectivity to resident CSC members without these tools to ensure all CSC members have equal opportunities to fully participate

In addition, the District has taken steps over the past several months to better serve CSC members and encourage their active engagement in the meetings and CERP development process. Ensuring effective steering committees requires substantial investment in the form of committee member time, District staff and other resources to schedule, organize, and facilitate frequent after-hours public meetings.

Figure 2-3 Arvin/Lamont AB 617 Community Steering Committee meeting



Visit https://community.valleyair.org/selected-communities/arvin-lamont/steering-committee-meetings for full documentation of meeting dates, agendas, materials and summaries.

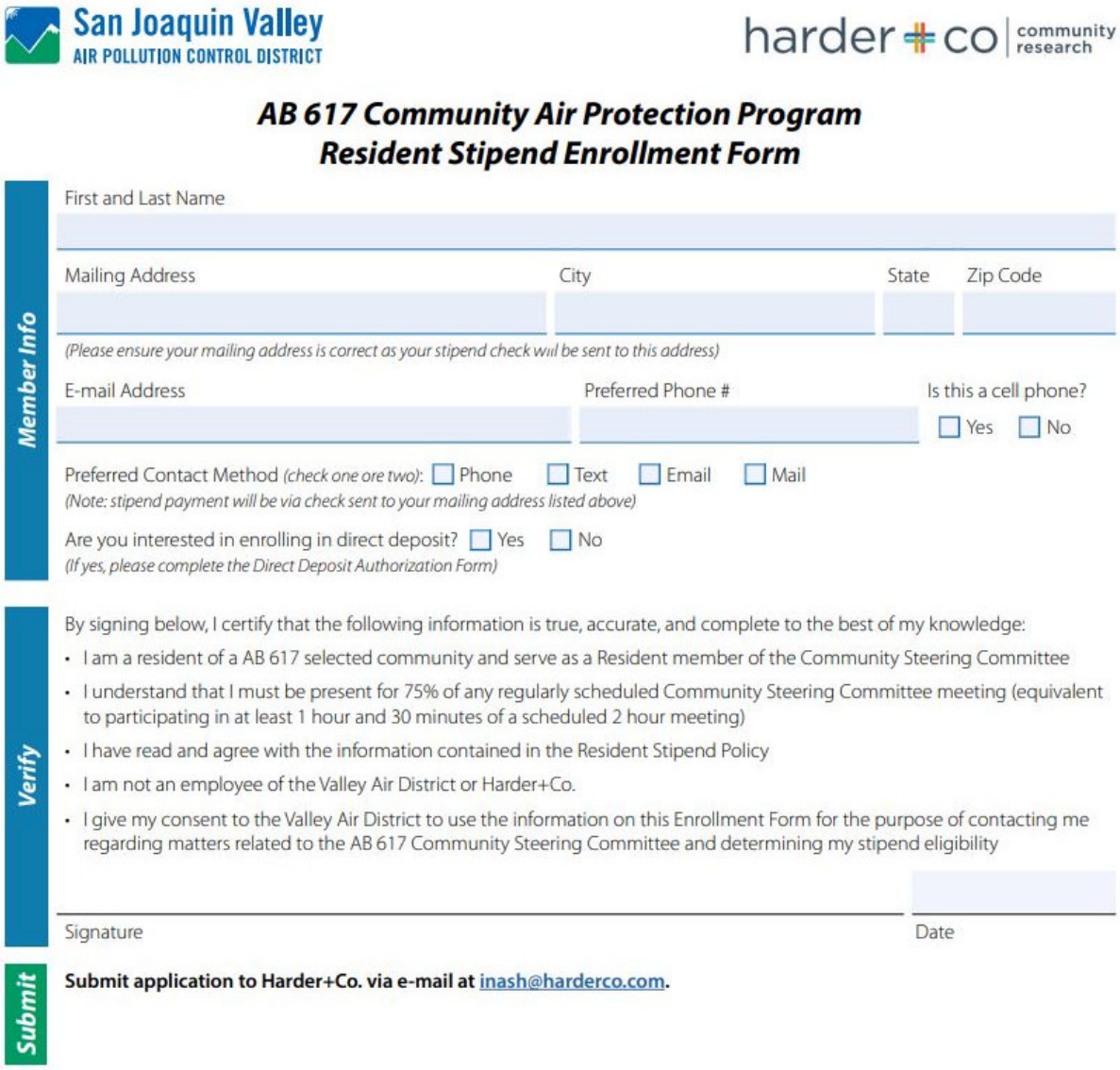
COMMUNITY PARTICIPATION AND RESIDENT STIPEND PROGRAM

The Arvin/Lamont Community Steering Committee met regularly, requiring ongoing participation and a significant time commitment from community residents, business owners, and other stakeholders. Providing stipends to help cover some time and expenses associated with attending meetings was established as an important way to support this critical participation and encourage sustained and meaningful community engagement throughout these processes.

Under the stipend program developed by District staff, in consultation with CSC stakeholders across all San Joaquin Valley AB 617 communities, residents who participate as community steering committee members, who do not receive compensation for their attendance at such meetings, may request a stipend to offset the cost of participating in each regular Community Steering Committee meeting. Eligible residents may receive a $75 stipend per Community Steering Committee meeting when their attendance is verified on the meeting attendance list or chat transcript for at least 75% of the scheduled meeting (equivalent to missing up to 30 minutes of a scheduled two hour meeting). Residents will receive stipends for attending up to fifteen (15) Community Steering Committee meetings in a calendar year, for a total cost of up to

$1,125 per year. The stipends for resident steering committee members are subject to the availability of state AB 617 funding and approved allocation in the District's Budget on an annual basis.

Figure 2-4 Resident Stipend Enrollment Form



San Joaquin Valley AIR POLLUTION CONTROL DISTRICT

harder+co community research

AB 617 Community Air Protection Program
Resident Stipend Enrollment Form

Member Info

First and Last Name

Mailing Address | City | State | Zip Code

(Please ensure your mailing address is correct as your stipend check will be sent to this address)

E-mail Address | Preferred Phone # | Is this a cell phone? ☐ Yes ☐ No

Preferred Contact Method *(check one ore two)*: ☐ Phone ☐ Text ☐ Email ☐ Mail

(Note: stipend payment will be via check sent to your mailing address listed above)

Are you interested in enrolling in direct deposit? ☐ Yes ☐ No

(If yes, please complete the Direct Deposit Authorization Form)

Verify

By signing below, I certify that the following information is true, accurate, and complete to the best of my knowledge:

- I am a resident of a AB 617 selected community and serve as a Resident member of the Community Steering Committee
- I understand that I must be present for 75% of any regularly scheduled Community Steering Committee meeting (equivalent to participating in at least 1 hour and 30 minutes of a scheduled 2 hour meeting)
- I have read and agree with the information contained in the Resident Stipend Policy
- I am not an employee of the Valley Air District or Harder+Co.
- I give my consent to the Valley Air District to use the information on this Enrollment Form for the purpose of contacting me regarding matters related to the AB 617 Community Steering Committee and determining my stipend eligibility

Signature | Date

Submit

Submit application to Harder+Co. via e-mail at inash@harderco.com.

2.3. COMMUNITY STEERING COMMITTEE CHARTER

The purpose of the Arvin/Lamont CSC is to support active community involvement and collaboration in the development of AB 617 activities and processes by providing a forum for identifying air pollution issues in the community and potential solutions.

The CSC will continue to advise and provide input and recommendations to District staff regarding the development and implementation of the CAMP and CERP to ensure that the plan and program reflect and address the community's highest priority air pollution

emissions-related concerns.

A Community Steering Committee Charter was developed in consultation with the Arvin/Lamont CSC members and a draft was presented to the members at the second meeting in May 2021. Charter language was discussed over several meetings, and the CSC reached consensus on the final Charter language at the August 5, 2021 meeting, and the CSC voted to approve the document the following meeting.

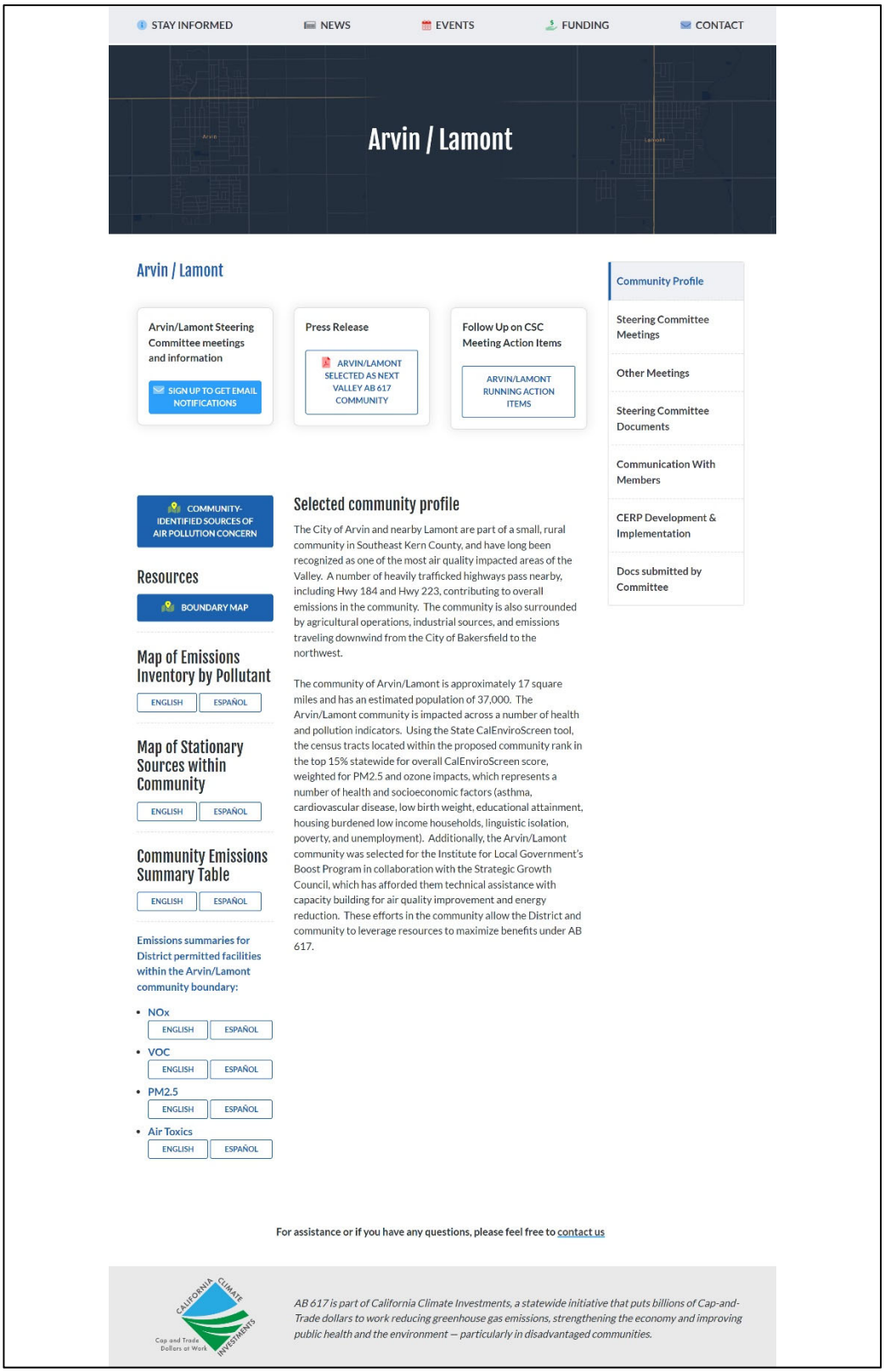
The final Charter can be found in Appendix B, and at https://community.valleyair.org/media/3589/arvinlamont-charter-final_7292021.pdf

2.4. ARVIN/LAMONT COMMUNITY WEBPAGE

A community webpage has been created for the Arvin/Lamont AB 617 Community: https://community.valleyair.org/selected-communities/arvin-lamont/

The webpage is regularly updated for community members and includes information about upcoming meetings, meeting materials (flyers, agendas, presentations, handouts, audio and video links, chat transcripts, meeting action items), interactive maps, CSC roster, committee charter, membership processes, air monitoring information and CERP documents. A screenshot of the community webpage is shown in Figure 2-8.

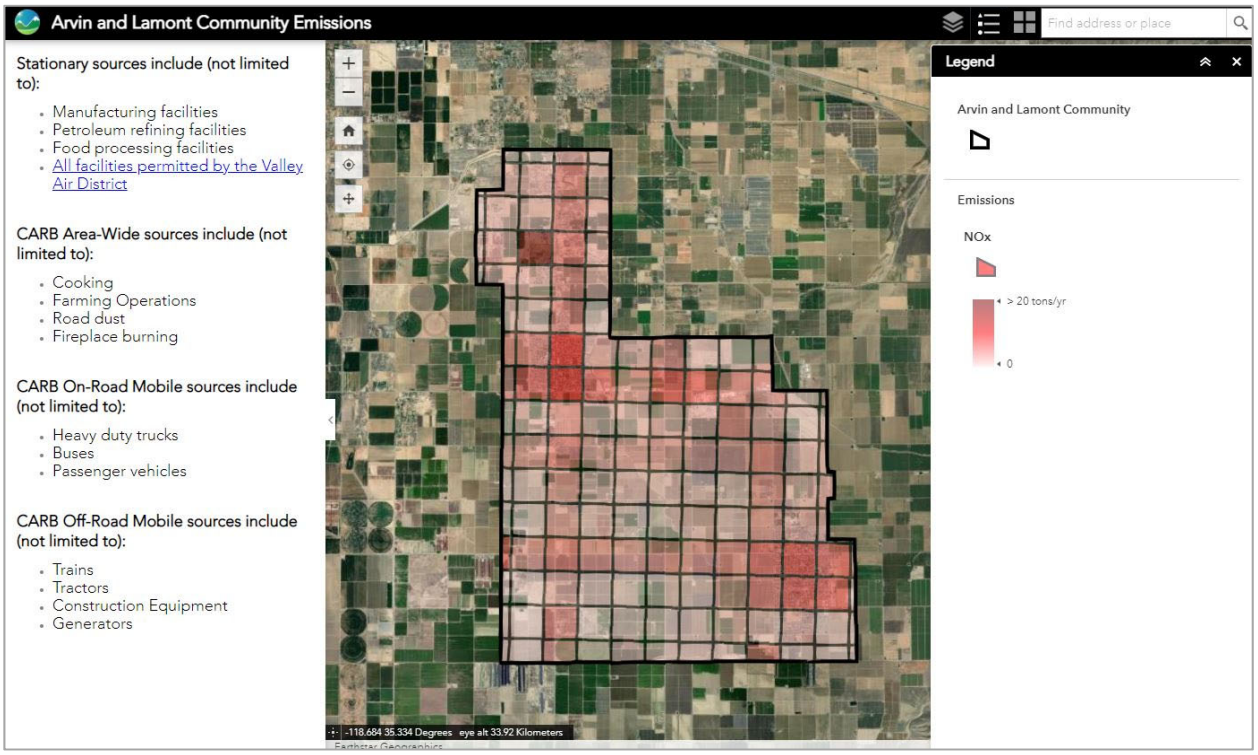
Figure 2-5 Arvin/Lamont AB 617 Community Webpage



In addition to being a portal for access to meeting materials and documents, the webpage also includes interactive maps that present data about the community (https://sjvapcd.maps.arcgis.com/apps/webappviewer3d/index.html?id=918e82e790e04e2aa64044243b95836b).

Figure 2-9 is an example of an interactive map that was created for the Arvin/Lamont AB 617 Community. These interactive maps provide data on land use, locations of facilities, schools, hospitals, and the air quality concerns identified by the Arvin/Lamont AB 617 Community Steering Committee and members of the public. This information was provided to help inform and to develop air quality priorities for the CERP.

Figure 2-6 Interactive Map Created for Arvin/Lamont AB 617 Community Steering Committee



2.5. COMMUNITY PARTNERS

After the Arvin/Lamont AB 617 CSC identified priorities for the community, partner agencies and organizations were invited to the meetings to provide updates, input, and presentations on current and future efforts to the in line with the goals of AB 617. CARB staff attended meetings regularly and provided information and updates to the committee.

The Kern County Department of Agriculture, City of Arvin and Kern County staff also attended regularly and provided an update on planning efforts in the community. The efforts of the Department of Pesticide Regulation, Office of Environmental Health Hazard Assessment, Kern County Ag Commissioner and others were all presented to the CSC

to help provide background information to the participants.

ADDITIONAL COMMUNITY ENGAGEMENT

The CSC and District staff have worked to engage and educate the public with regard to AB 617 and the efforts being made in the Arvin/Lamont AB 617 Community. Meetings between community members, environmental justice organizations, industry, agency representatives, and other stakeholders have occurred to provide assistance and/or prompt responses to concerns raised regarding the AB 617 process. In addition, staff often discussed AB 617 opportunities at media interviews and during outreach events. A full list of outreach efforts is available in Appendix A.

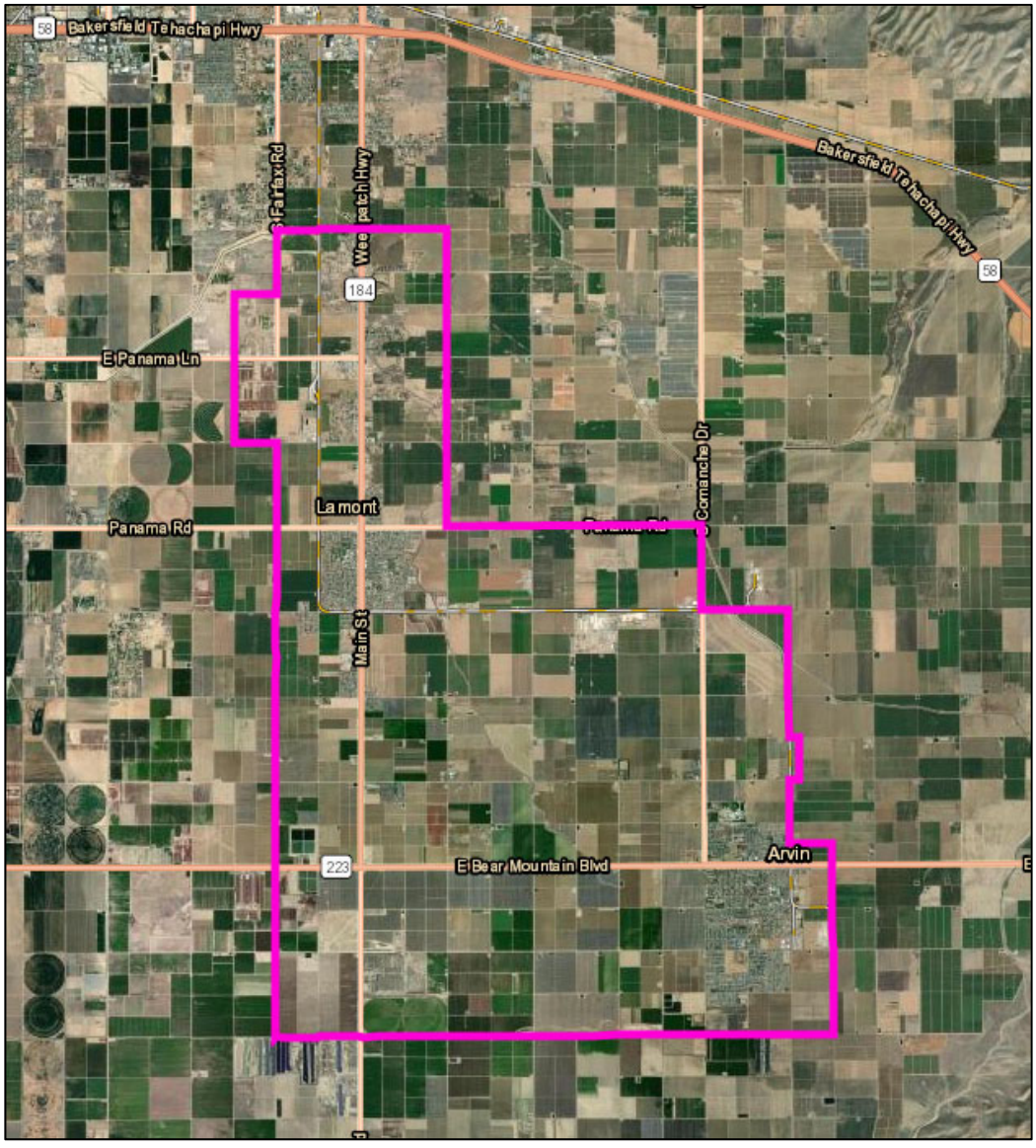
The Arvin/Lamont AB 617 CSC will continue to work to implement the CERP actions after its adoption by the District Governing Board and the CARB Board, and to provide periodic community updates on implementation progress. Community engagement is essential to the success of the CERP as well as the AB 617 program as a whole, and all parties are committed to improve on existing outreach efforts in the coming months and years.

3. UNDERSTANDING THE COMMUNITY

3.1. COMMUNITY PROFILE

The City of Arvin and nearby Lamont are part of a small, rural community in Southeast Kern County, and have long been recognized as one of the most air quality impacted areas of the Valley. A number of heavily trafficked highways pass nearby, including Hwy 184 and Hwy 223, contributing to overall emissions in the community. The community is also surrounded by agricultural operations, industrial sources, and emissions traveling downwind from the City of Bakersfield to the northwest.

Figure 3-1 Arvin/Lamont AB 617 Community



ARVIN/LAMONT AIR QUALITY CHALLENGES

The Arvin/Lamont community boundary area is approximately 43 square miles and has an estimated population of 41,000. The Arvin/Lamont community is impacted across a number of health and pollution indicators. Using the State CalEnviroScreen tool (version 3.0), the census tracts located within the proposed community rank in the top 15% statewide for overall CalEnviroScreen score, weighted for PM2.5 and ozone impacts, which represents a number of health and socioeconomic factors (asthma, cardiovascular disease, low birth weight, educational attainment, housing burdened low income households, linguistic isolation, poverty, and unemployment). The majority of emissions affecting the Arvin/Lamont AB 617 community come from heavy-duty truck and off road equipment emissions from the highways and main regional roads that run through the community.

While the regulatory air quality monitors around Arvin/Lamont show that Valley portion of Southeastern Kern County continues to have some of the toughest air quality challenges in the region, decades-long air quality trends demonstrate continued reductions in air pollution because of pollution reductions efforts across the Valley. AB 617 brings opportunity to focus resources that will help continue to work in the community to find innovative emissions reduction solutions to improve air quality and public health in the Arvin/Lamont community.

In addition to the emissions originating from mobile sources in the area, this community also includes industrial development and area-wide sources of pollution such as gas stations, commercial cooking, residential wood burning, and consumer products that also contribute significantly to the community's emissions levels.

EMISSIONS IN COMMUNITY

Based on emissions inventory and current air monitoring data in this community, pollutants of concern include particulate matter less than 2.5 micrometers in diameter (PM2.5), Black Carbon (BC), Oxides of Nitrogen (NOx), Carbon Monoxide (CO), Ozone (O_3), Volatile Organic Compounds (VOCs), and pesticides.

Based on District air quality analysis modeling, the Arvin/Lamont AB 617 Community was found to have exceeded the 24-hour average PM2.5 concentration levels of 12, 35, 55, and 65 $\mu g/m^3$ a total of 104, 17, 9, and 6 days, annually, on average during the 2018-2020 period, respectively. In addition, this community was found to have exceeded the 8-hour average ozone concentration prioritization factor levels of 70, 75, and 84 ppb a total of 61, 32, and 10 days, annually, on average during the 2018-2020 period, respectively. Details about the nature and formation of local air pollution and its adverse health impacts on the community of Arvin/Lamont AB 617 Community is summarized in Appendix G.

3.2. TECHNICAL ASSESSMENT TO UNDERSTAND COMMUNITY POLLUTION IMPACTS

Conducting a technical assessment is a necessary step in Community Emissions Reduction Program development. The technical assessment relies on results from a variety of analyses to characterize emissions in the community and inform community emissions reduction program development and implementation. This assessment will provide the baseline from which emissions reductions can be measured.

The source attribution technical approach established by CARB provides a methodology for assessing, identifying, and estimating the relative contribution of sources or categories of sources, including but not limited to mobile, stationary, and area-wide sources, to elevated exposure to air pollution in impacted communities. The District's source attribution analysis is based on the following:

- Assesses the share of mobile, area-wide, and stationary source emissions generated in the community,
- Is based on best available data in order to characterize the contribution of emissions sources in the community,
- Follows one of CARB's recommended source attribution approaches.

Based on the above, the District has implemented CARB's Community Emissions Inventory Approach. The following section discusses the community emissions inventory approach and summarizes emission sources in the community. A detailed community-level inventory and source apportionment are included in Appendix C.

COMMUNITY EMISSIONS INVENTORY APPROACH

A community level emissions inventory estimates air pollutant emissions from mobile sources (e.g., cars, heavy-duty trucks, locomotives), area-wide sources (e.g., fireplaces, outdoor food cooking, fugitive dust), and stationary sources (e.g., gas stations, auto body shops, manufacturing facilities) within the community.

The community level inventory consists of the mobile and area-wide sources spatially allocated in the community and stationary sources. A community emissions inventory is the compilation of criteria pollutant and air toxics emissions data from air pollution sources that are within the community. The community emissions inventory includes emissions of volatile organic compounds / reactive organic gases (VOC/ROG), oxides of nitrogen (NOx), particulate matter of 2.5 microns (PM2.5), and toxic air contaminants (e.g. diesel PM).

COMMUNITY EMISSIONS INVENTORY OVERVIEW

Emissions inventories are estimates of the amount and type of pollutants emitted into the atmosphere by mobile sources, stationary sources, and area-wide sources. Additionally, emission inventories are the foundation for any emission reduction program and provide information on the existing air emissions and related air quality in the community, and support development of emission reduction strategies and future

emission targets to improve air quality in the community.

Existing traditional criteria pollutant and air toxics emission inventories (that provide combined coverage of mobile and stationary sources) are generally regional in geographic scale and may not adequately characterize emission impacts at the community-level. Developing community-scale emission inventories for understanding existing baseline emissions and tracking future emission reductions within communities selected for Community Emissions Reduction Programs (CERPs) and Community Air Monitoring Plans (CAMPs) is an important piece of AB 617. Information and data collected as part of the CAMP will be available real-time and District staff will be providing regular updates on the analysis of the data which may result in modification to existing or development of new strategies for the CERP.

AGENCY COLLABORATIONS

CARB and District staff worked in parallel to develop a comprehensive set of emissions inventory data for the community. The District worked with stationary source facilities in the community to develop the point source emission estimates. CARB staff developed the community-level emission inventory for mobile and area- wide sources. CARB worked with several State and local agencies such as the Department of Transportation (Caltrans), the Department of Motor Vehicles (DMV), and the California Energy Commission (CEC) to assemble activity information necessary to develop the community-level mobile and area-wide source emission estimates. CARB and District staff conducted a thorough review of the community inventory to ensure that the emission estimates reflect the most recent data for stationary sources, and that estimates for mobile and area-wide sources are based on the most recent models and methodologies.

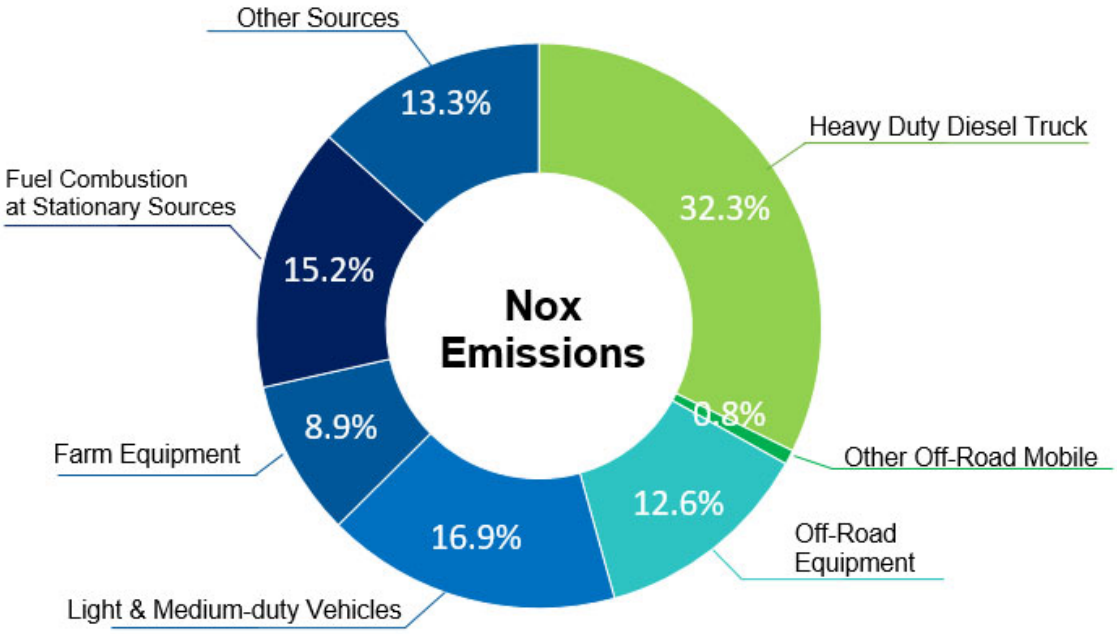
The emissions inventory also includes future forecasted values. The forecasted community-level emissions inventory is based on the growth profiles for stationary sources, mobile, and area-wide source categories provided by CARB. Forecasted emissions include growth and control factors that reflect historical trends, current conditions, and recent economic and demographic forecasts.

COMMUNITY EMISSION INVENTORY SUMMARIES

What types of sources contribute to air pollution in Arvin/Lamont?

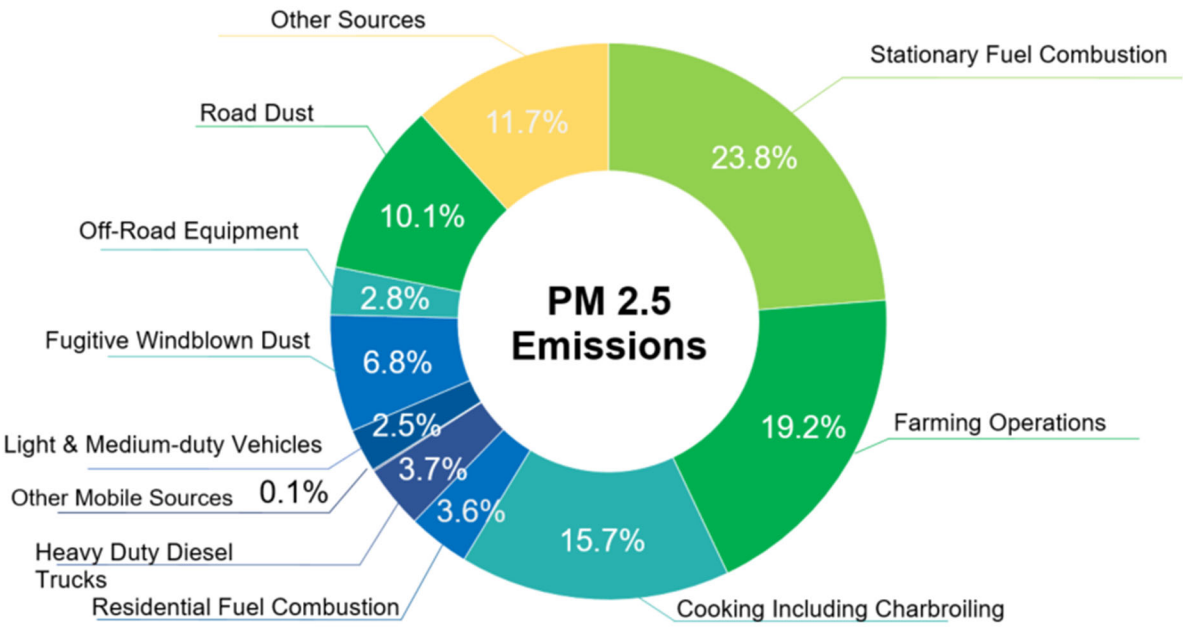
The largest sources of emissions in and around the community include heavy-duty vehicles, medium-duty vehicles, and passenger cars, as well as off-road equipment, and stationary sources. Permitted stationary sources regulated by the District in the Arvin/Lamont AB 617 Community include agricultural products, automotive body repair and paint shops, concrete and construction materials manufacturing, food products; gasoline dispensing operations, government services, metal fabrication, oil and gas industry, product distribution, telecommunications, wood products and coating facilities. Farming operations, residential fuel combustion, paved road dust emissions, and commercial cooking also contribute significantly to the community's emissions inventory.

Figure 3-2 Sources of NOx Emissions in the Community



Almost three-quarters of NOx emissions in the Arvin/Lamont AB 617 Community are from mobile sources. On road mobile sources account for 49.2% of NOx emissions in Arvin/Lamont, including 32.3% of the NOx inventory from heavy-duty diesel trucks and 16.9% from light and medium-duty vehicles. Off-road mobile sources, including trains, aircraft, and off-road equipment such as yard trucks, produce 12.6% of the NOx emissions in the community. Fuel combustion at stationary sources is also a significant source of NOx emissions in the community. For more specific information, refer to Appendix C (Source Apportionment and Community).

Figure 3-3 Sources of Directly-Emitted PM2.5 Pollution in the Community



The largest sources of directly-emitted PM2.5 emissions in the Arvin/Lamont AB 617 Community are stationary sources, farming operation, and cooking including charbroiling. Road dust, fugitive windblown dust, and other sources are also significant sources of PM2.5 in the community. Other sources include trains, farm equipment, off-road equipment, unpaved roads, and managed burning and disposal.

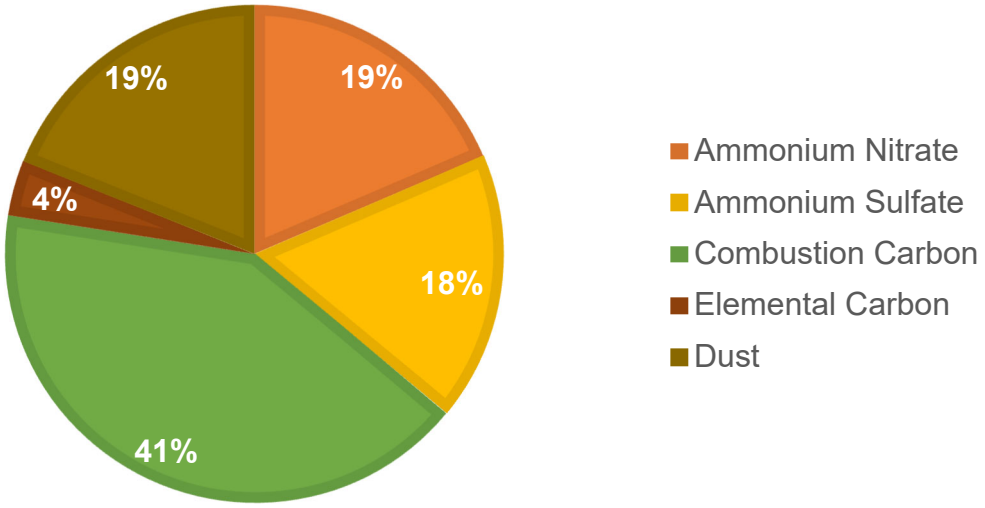
PM2.5 Speciation: What type of PM2.5 is in the ambient air?

PM2.5 in the Arvin/Lamont AB 617 Community is comprised of many species that contribute to the total PM2.5 concentration measured by air monitors, as summarized in Table 3-3 below. This complex mixture is attributable to mobile, stationary, and area-wide sources described above, as well as naturally occurring emissions. Although the list of species contributing to PM2.5 in the Arvin/Lamont AB 617 Community is lengthy, it can be grouped into larger representative categories. The following is a brief description of how each of these larger species categories are formed and emitted into the atmosphere. The following figures show the estimated speciation of PM2.5 in the Arvin/Lamont Community, based on modeling data and historical PM2.5 speciation monitoring and analysis conducted in the nearby City of Bakersfield.

Table 3-1 Summary of PM2.5 Species

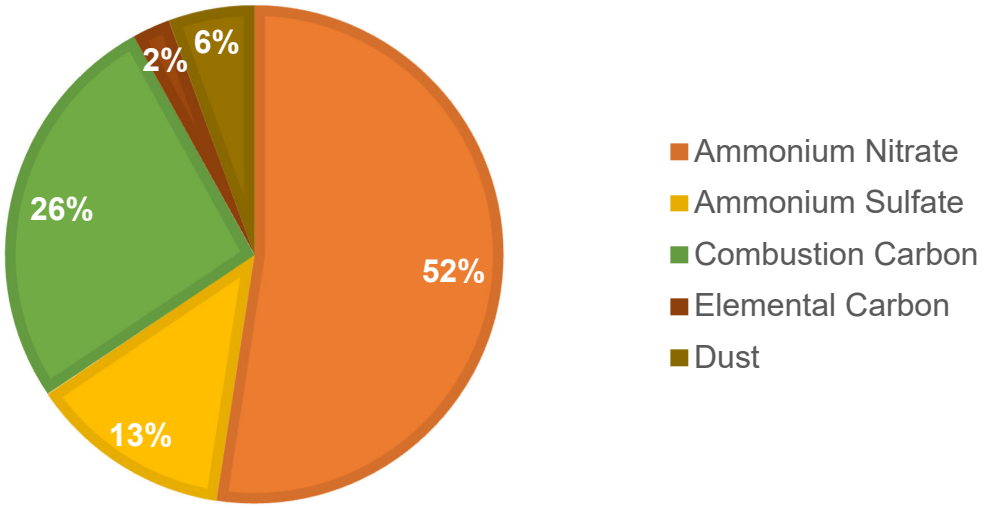
PM2.5 Species	Description
Organic carbon (Combustion Carbon)	Directly emitted, primarily from combustion sources (e.g. residential wood combustion, mobile sources, stationary sources). Also, smaller amounts attached to geologic material and road dusts. May also be emitted directly by natural/biogenic sources.
Elemental carbon	Also called soot or black carbon; formed during incomplete combustion of fuels (e.g. diesel engines).
Geologic material (Dust)	Road dust and soil dust that are entrained in the air from activity, such as soil disturbance or airflow from traffic.
Trace metals	Identified as components from soil emissions or found in other particulates having been emitted in connection with combustion from engine wear, brake wear, and similar processes. Can also be emitted from fireworks.
Secondary organic aerosol	Secondary particulates formed from photochemical reactions of organic carbon.
Ammonium nitrate	Reaction of ammonia and nitric acid, where the nitric acid is formed from nitrogen oxide emissions, creating nitric acid in photochemical processes or nighttime reactions with ozone.
Ammonium sulfate	Reaction of ammonia and sulfuric acid, where the sulfuric acid is formed primarily from sulfur oxide emissions in photochemical processes, with smaller amounts forming from direct emissions of sulfur.
Combined water	A water molecule attached to one of the above molecules. Combined water is not included when measuring mass of PM2.5 for regulatory purposes, and is therefore excluded from the following charts.

Figure 3-4 Species Contribution to Annual Average PM2.5 Concentrations in the Community



Combustion carbon, ammonium nitrate, and ammonium sulfate all are significant species of PM2.5 emissions on an average day in the Arvin/Lamont AB 617 Community.

Figure 3-5 Species Contribution to Peak Day PM2.5 Concentrations in the Community



As shown in the figure above, peak PM2.5 emission days in the community are significantly impacted by ammonium nitrate, which is created from the chemical reaction of NOx and ammonia, largely from fuel combustion during multiday stagnation events.

However, ammonium nitrate is generally regarded as having relatively low toxicity compared to other PM2.5 species like elemental carbon.

How will the community inventory change in the future?

The tables and graphs below summarize the total Arvin/Lamont AB 617 Community emissions inventories for years 2019, 2026, and 2031. These graphs show the proportion of PM2.5, NOx, and VOC emissions that originate from stationary, area, and mobile sources of emissions. The projected inventories take into account the projected emissions from regional transportation plan projects and compliance with regulatory deadlines. The following figures show how the Arvin/Lamont AB 617 Community-level inventory is expected to change into the future in years 2026 and 2031.

Figure 3-6 2019 Arvin/Lamont AB 617 Community Emissions Inventory

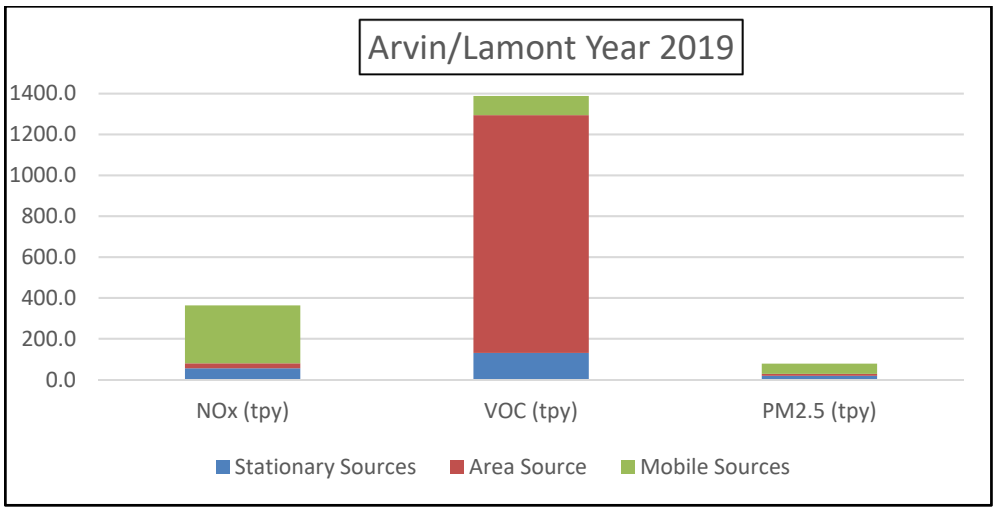


Table 3-2 2019 Arvin/Lamont AB 617 Community Emissions Inventory

Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Stationary Sources	55.1	130.5	18.5
Area Source	24.3	1164.0	9.69
Mobile Sources	283.9	93.6	49.75

Figure 3-7 2026 Projected Arvin/Lamont AB 617 Community Emissions Inventory

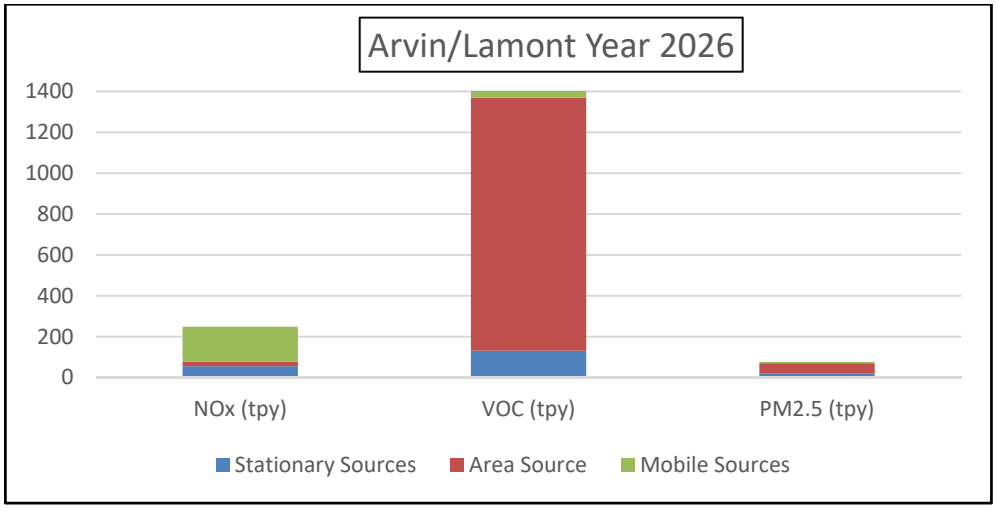


Table 3-3 2026 Projected Arvin/Lamont AB 617 Community Emissions Inventory

Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Stationary Sources	43.6	127.8	18.3
Area Source	21.8	1238.6	51.3
Mobile Sources	171.0	72.9	6.4

Figure 3-8 2031 Projected Arvin/Lamont AB 617 Community Emissions Inventory

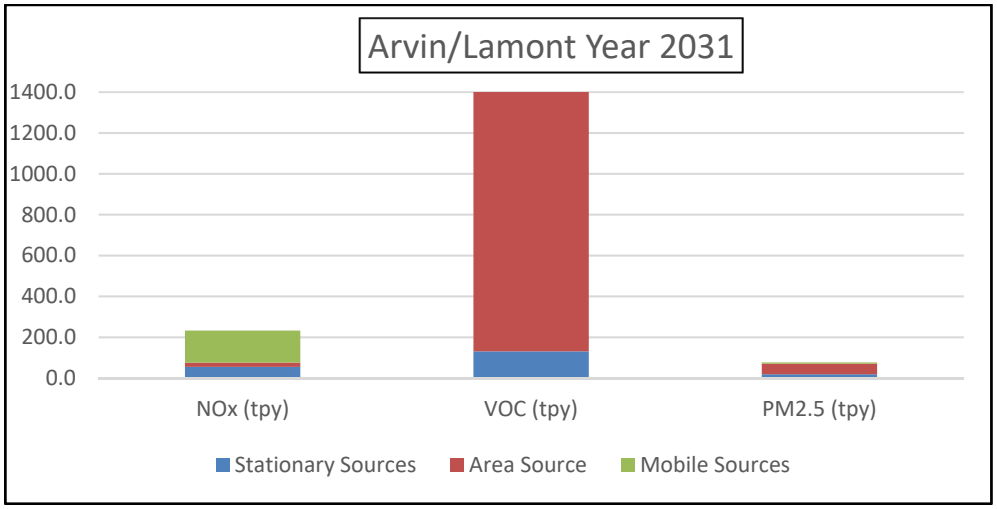


Table 3-4 2031 Projected Arvin/Lamont AB 617 Community Emissions Inventory

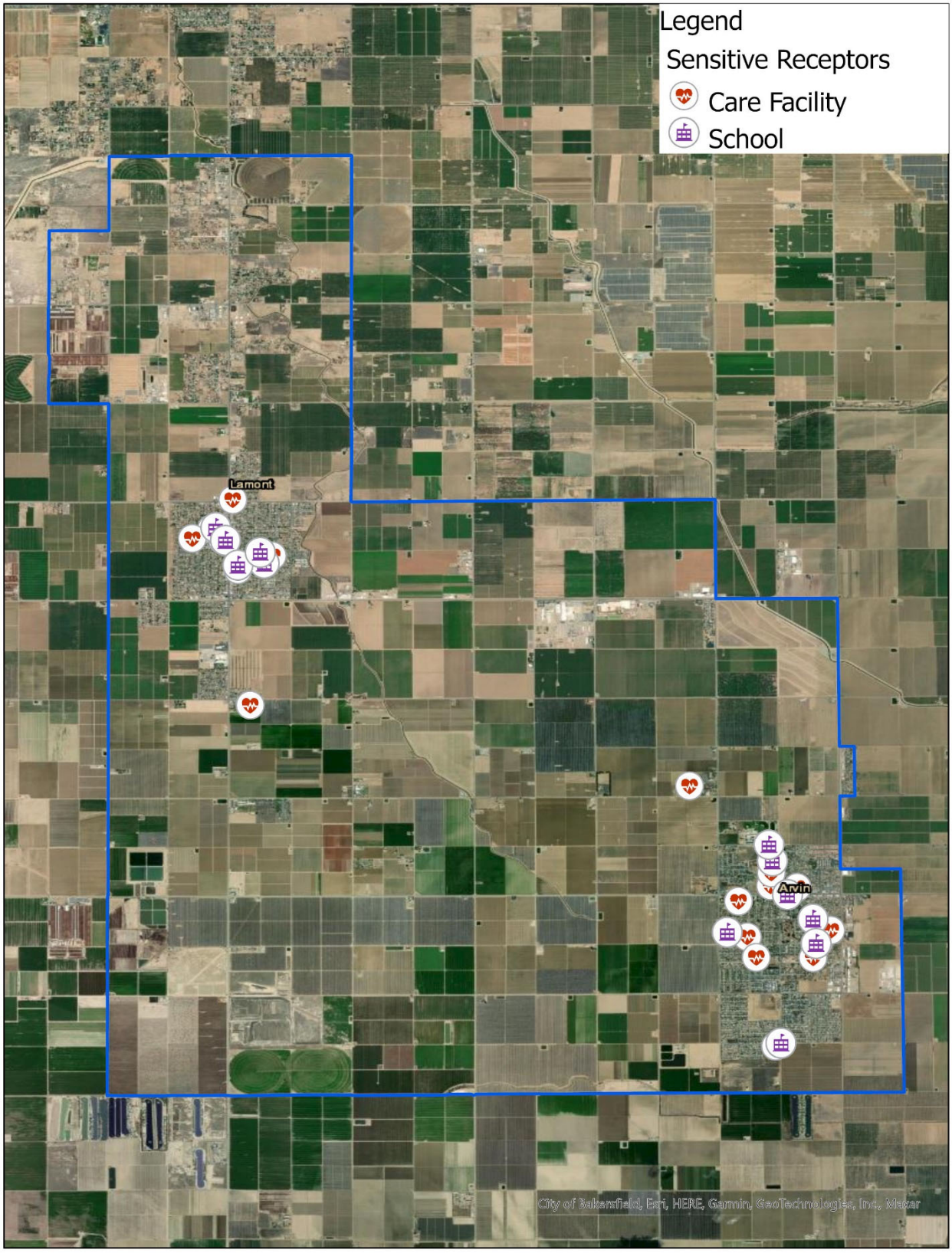
Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Stationary Sources	38.6	132.0	18.4
Area Source	20.7	1284.5	52.4
Mobile Sources	156.8	66.8	6.0

For further information about the emissions inventory for the Arvin/Lamont AB 617 Community, including the stationary source emissions inventory, projected emissions inventory for District permitted facilities, mobile source inventory, and area-wide sources inventory please refer to Appendix C.

SENSITIVE RECEPTORS

The location of sensitive receptors is important to assess the impacts of emissions on public health. Sensitive Receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling unit(s). The map below shows sensitive receptor locations within the community. The sensitive receptors currently in the community include 12 schools and 21 care facilities. Sensitive receptors within the community are located in proximity to mobile on-road sources, manufacturing and industrial sources, off-road mobile equipment, and residential fuel combustion sources.

Figure 3-9 Sensitive Receptor Locations in the Arvin/Lamont Community



Where can I get more information about air pollution in Arvin/Lamont AB 617 Community? To provide detailed community-level data to the Steering Committee and the general public, District staff have created an interactive mapping tool that shows the locations of sensitive receptors, as well as the locations of and emissions inventory for stationary sources, area sources, and both on-road and off-road mobile emissions. Examples of the emissions data available through this mapping tool are shown in the figures below. Please visit the District website to zoom in and explore the community: https://sjvapcd.maps.arcgis.com/apps/instant/sidebar/index.html?appid=2c8ad5b3044d417899b1f256fc5322c0?id=918e82e790e04e2aa64044243b95836b and https://sjvapcd.maps.arcgis.com/apps/webappviewer3d/index.html?id=918e82e790e04e2aa64044243b95836b

Figure 3-10 District Mapping Tool Showing Types and Locations of Stationary Source Operations in Community

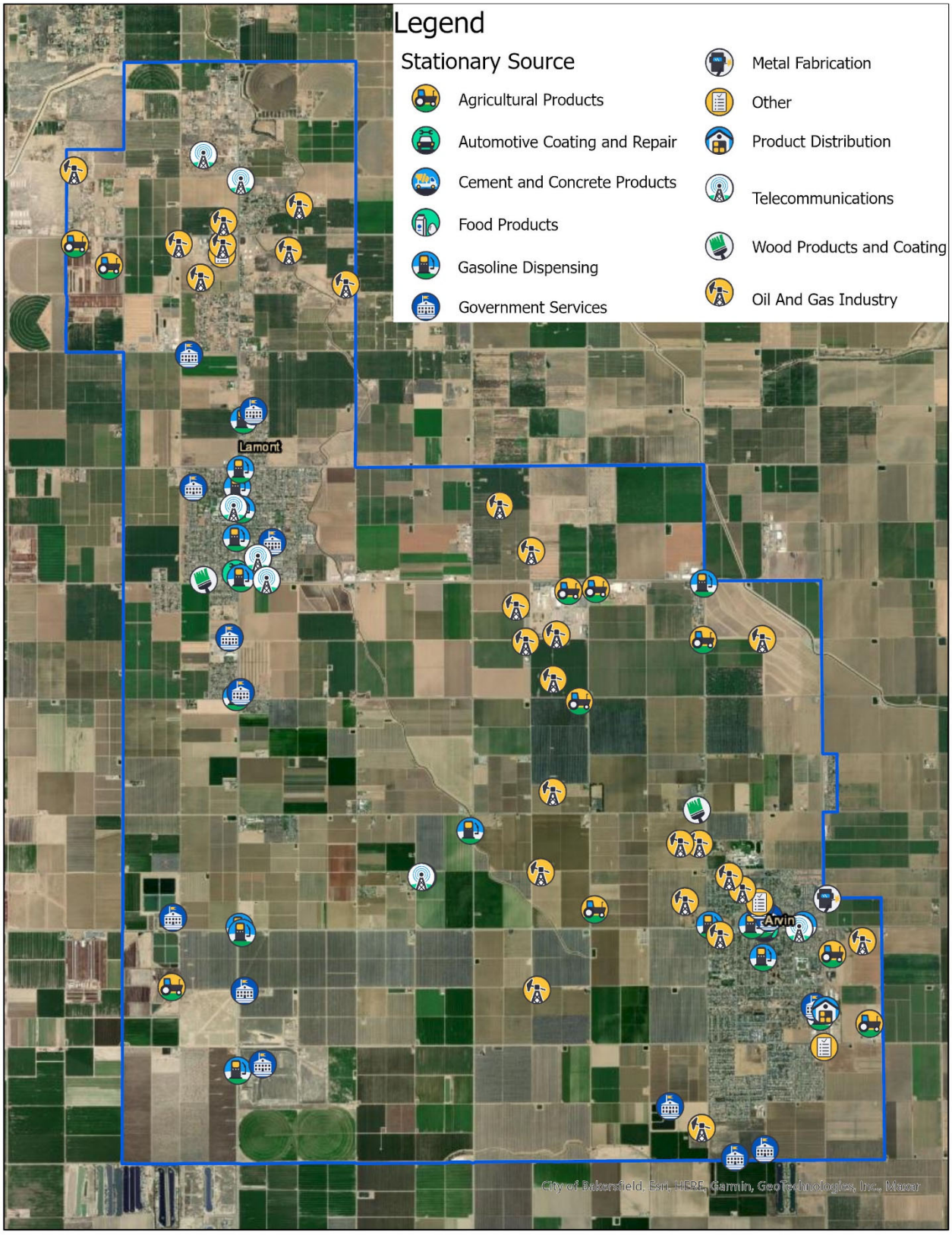
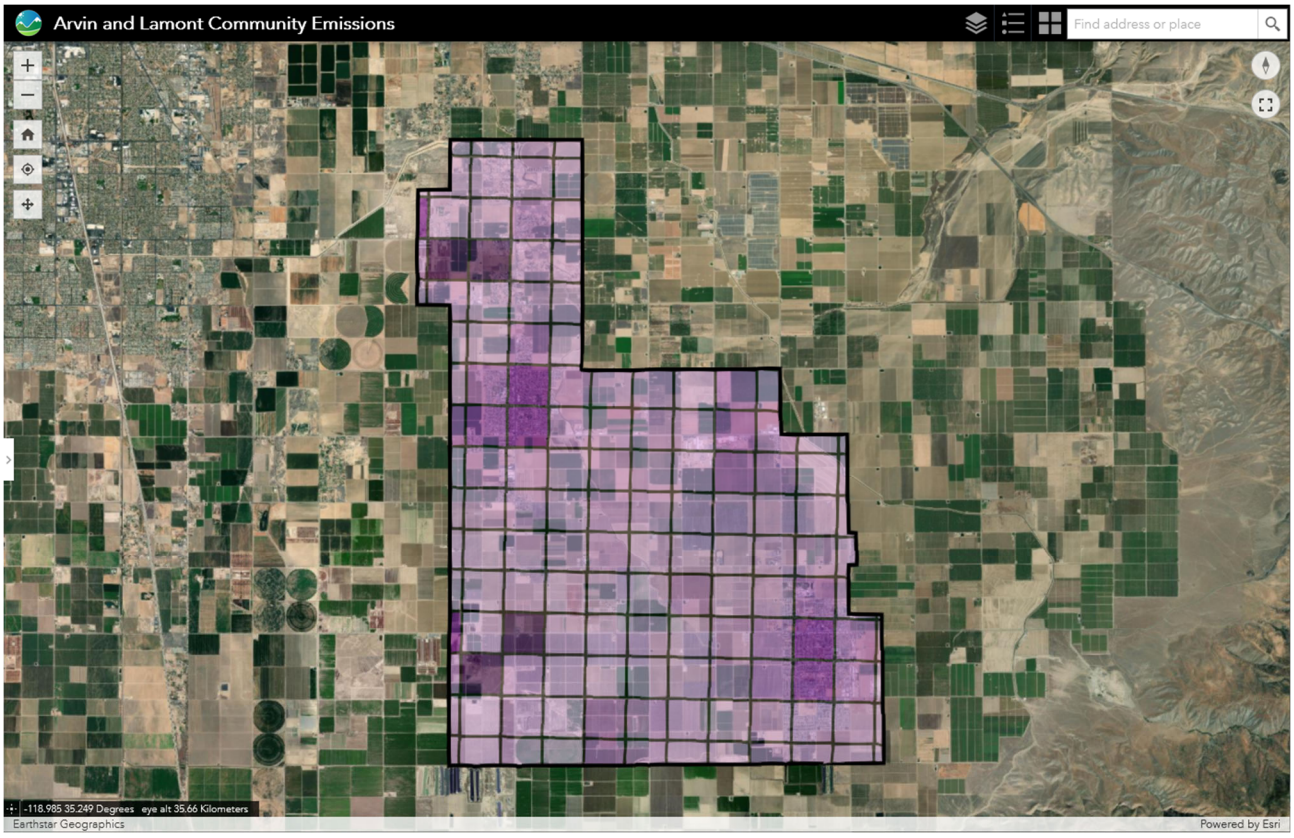


Figure 3-11 District Mapping Tool Showing Concentrations of Area-Wide Emissions within the Community



3.3. EXISTING AIR QUALITY PROGRAMS

DISTRICT PLANS FOR ATTAINMENT OF HEALTH-BASED AIR QUALITY STANDARDS

For more than two decades, the District has adopted numerous attainment plans to reduce ozone and particulate precursor emissions. The District's multifaceted approach to reducing emissions in the San Joaquin Valley consists of a combination of innovative regulatory and non-regulatory measures. The U.S. Environmental Protection Agency (EPA) periodically reviews and establishes health-based national air quality standards (also referred to as NAAQS) for ozone, particulates, and other criteria air pollutants guided by the Clean Air Act. The District has adopted numerous air quality attainment plans over the years that identify measures needed in the Valley to attain EPA's increasingly stringent health-based NAAQS.

The District's plans include emissions inventories that identify sources of air pollutants, evaluations for feasibility of implementing potential opportunities to reduce emissions, sophisticated computer modeling to estimate future levels of pollution, and a strategy for how air pollution will be further reduced. District plans also include innovative alternative strategies for accelerating attainment through non-regulatory measures such as incentive programs; technology advancement programs; the District's legislative platform; community outreach and education programs; and additional strategies such as energy efficiency, eco-driving, green purchasing and contracting, supporting urban heat island mitigation efforts, and encouraging cleaner methods of generating electrical energy and mechanical power.

Measures implemented for these Valley-wide strategies also apply to the AB 617 community of Arvin/Lamont and have resulted in tremendous emissions reductions being achieved, to the benefit of the health of all Valley residents. Most recently, after an extensive 3-year public process, the District, in coordination with CARB and EPA, adopted the *2018 PM2.5 Plan*. This historic plan builds on decades of air quality improvement efforts and establishes a comprehensive strategy for continuing to improve the Valley's air quality and meet the latest federal PM2.5 standards. Further information on the comprehensive rules, regulations, and other programs that have been developed as a part of the District's attainment planning process are detailed in the District's plans for attainment of state and federal air quality standards, with links provided to each attainment plan below:

PM2.5 Plans for Attainment

2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards
The District adopted the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards* on November 15, 2018. This plan addresses the EPA federal 1997 annual PM2.5 standard of 15 µg/m³ and 24-hour PM2.5 standard of 65 µg/m³; the 2006 24-hour PM2.5 standard of 35 µg/m³; and the 2012 annual PM2.5 standard of 12 µg/m³.

2016 Moderate Area Plan for the 2012 PM2.5 Standard
The District adopted the *2016 Moderate Area Plan for the 2012 PM2.5 Standard* on September 15, 2016. This plan addresses the EPA federal annual PM2.5 standard of 12 µg/m³, established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment.

2015 Plan for the 1997 PM2.5 Standard
The District adopted the *2015 Plan for the 1997 PM2.5 Standard* on April 16, 2015. This plan addresses EPA's annual PM2.5 standard of 15 µg/m³ and 24- hour PM2.5 standard of 65 µg/m³, established in 1997.

2012 PM2.5 Plan
The District adopted the *2012 PM2.5 Plan* in December, 2012. This plan addresses EPA's 24-hour PM2.5 standard of 35 µg/m³, which was established by EPA in 2006.

2008 PM2.5 Plan
The District adopted the *2008 PM2.5 Plan* in April, 2008. This plan addresses EPA's annual PM2.5 standard of 15 µg/m³, which was established by EPA in 1997.

PM10 Plans for Attainment
2007 PM10 Maintenance Plan
The District adopted the *2007 PM10 Maintenance Plan* in September 2007, to assure the San Joaquin Valley's continued attainment of EPA's PM10 standard. EPA designated the Valley as an attainment/maintenance area for PM10.

Ozone Plans for Attainment

2022 Plan for the 2015 8-hour Ozone Standard (Upcoming Ozone Plan)
The attainment plan for the 2015 federal ozone standard will build upon comprehensive strategies already in place from adopted District plans and CARB's statewide strategies. The NOx reduction commitments from the recent *2018 PM2.5 Plan* and *2016 Ozone Plan*, and other ongoing measures will assist the Valley in meeting the 70 ppb federal ozone standard. Strategies for attainment of the *2015 8-hour ozone standard* will be developed through a public process, building on decades of effective control strategies. District staff will present regular updates regarding the development of the plan at public meetings and workshops, including upcoming meetings of the District Governing Board, Citizens Advisory Committee (CAC), and the Environmental Justice Advisory Group (EJAG).

2020 RACT Demonstration
The District adopted the 2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard on June 18, 2020.

2016 Plan for the 2008 8-Hour Ozone Standard
The District adopted the *2016 Plan for the 2008 8-Hour Ozone Standard* in June 2016. This plan satisfies Clean Air Act requirements and ensures expeditious attainment of the

75 parts per billion 8-hour ozone standard.

2014 RACT SIP
The District adopted the Reasonably Available Control Technology (RACT) Demonstration for the 8-Hour Ozone State Implementation Plan in June, 2014.

2013 Plan for the Revoked 1-Hour Ozone Standard
The District adopted the 2013 Plan for the Revoked 1-Hour Ozone Standard in September, 2013.

2009 RACT SIP
The District adopted the Reasonably Available Control Technology (RACT) Demonstration for Ozone State Implementation Plans (SIP) in April, 2009.

2007 Ozone Plan
The District adopted the *2007 Ozone Plan* in April 2007. This plan addresses EPA's 8-hour ozone standard of 84 parts per billion (ppb), which was established by EPA in 1997.

As a result of the District's stringent and comprehensive air quality management strategy along with significant investments made by Valley businesses and residents, PM2.5 and ozone levels are now at historically low levels, and the Valley continues to be in attainment of the PM10 NAAQS. Emissions from stationary sources have been reduced by 85%, cancer risk from exposure to air pollutants has been reduced by 95%, population exposure to elevated PM2.5 levels have been reduced by 85%, and population exposure to elevated ozone levels have been reduced by 90%. This success in reducing emissions Valley-wide provides assurance that targeted strategies will provide the desired results in helping to improve the air quality in AB 617 selected communities.

REGULATORY MEASURES

The District has implemented a comprehensive regulatory control strategy for decades. Since 1992, the District has adopted nearly 650 rules and rule amendments to implement aggressive control strategies. Many current rules are fourth or fifth generation, meaning that they have been revised and emissions limits have been lowered numerous times, as new emission control technology has become available and cost effective. Building on decades of developing and implementing effective air pollution control strategies, District rules are required, by the Environmental Protection Agency, to implement the most stringent measures, including best available control measures for new and modified permitting projects, and best available retrofit control technologies for existing equipment when feasible to require in the San Joaquin Valley. The District's stringent and innovative rules have set benchmarks for other air agencies throughout California and the nation. Regulations implemented by the District have reduced emissions from stationary sources by over 80% to date and will continue to achieve significant emissions reductions in the coming years.

District rules reduce emissions of criteria air pollutants and toxic air contaminants from

sources in and around the community. Permitted stationary sources regulated by the District in the Arvin/Lamont AB 617 Community include agricultural commodities storage and transfer operations, petroleum refining operations, composting and waste disposal operations, chemical receiving and storage, fabricated metal parts and products, gasoline dispensing operations, government services, municipal water treatment operations, health care centers, skilled nursing care facilities, and telecommunications facilities. District rules that reduce emissions from local sources in the Arvin/Lamont AB 617 Community are outlined in the following table:

Table 3-5 District Rules Reducing Arvin/Lamont AB 617 Community Air Pollution

Rule #	Rule Description
4001	New Source Performance Standards
4002	National Emission Standards for Hazardous Air Pollutants
4101	Visible Emissions
4102	Nuisance
4201	Particulate Matter Concentration
4202	Particulate Matter Emission Rate
4301	Fuel Burning Equipment
4305	Boilers, Steam Generators, And Process Heaters - Phase 2
4306	Boilers, Steam Generators, and Process Heaters - Phase 3
4307	Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr TO 5.0 MMBtu/hr
4309	Dryers, Dehydrators, and Ovens
4311	Flares
4320	Advanced Emission Reduction Options For Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr
4352	Solid Fuel Fired Boilers, Steam Generators, and Process Heaters
4455	Components At Petroleum Refineries, Gas Liquids Processing Facilities, And Chemical Plants
4601	Architectural Coatings
4603	Surface Coating Of Metal Parts And Products, Plastic Parts And Products, And Pleasure Crafts
4606	Wood Products And Flat Wood Paneling Products Coating Operations
4607	Graphic Arts And Paper, Film, Foil And Fabric Coatings
4612	Motor Vehicle And Mobile Equipment Coating Operations
4621	Gasoline Transfer Into Stationary Storage Containers, Delivery Vessels, And Bulk Plants
4622	Gasoline Transfer Into Motor Vehicle Fuel Tanks
4623	Storage Of Organic Liquids
4624	Organic Liquid Loading
4652	Coatings and Ink Manufacturing
4653	Adhesives And Sealants
4661	Organic Solvents
4672	Petroleum Solvent Dry Cleaning Operations

Rule #	Rule Description
4684	Polyester Resin Operations
4692	Commercial Charbroiling
4693	Bakery Ovens
4701	Internal Combustion Engines - Phase 1
4702	Internal Combustion Engines
4801	Sulfur Compounds
4901	Wood Burning Fireplaces and Wood Burning Heaters
4902	Residential Water Heaters
4905	Natural Gas-Fired, Fan-Type Central Furnaces
8011	General Requirements
8021	Construction, Demolition Excavation, Extraction, and Other Earthmoving Activities
8031	Bulk Materials
8041	Carryout and Trackout
8051	Open Areas
8061	Paved and Unpaved Roads
8071	Unpaved Vehicle/Equipment Traffic Areas
8081	Agricultural Sources
9310	School Bus Fleets
9410	Employer Based Trip Reduction
9510	Indirect Source Review

While California and the federal government have direct authority to regulate tailpipe emissions from mobile sources, the District has also adopted innovative regulations such as the Rule 9510 - Indirect Source Review (discussed in more detail later in this section) and Rule 9410 - Employer-based Trip Reduction to reduce emissions from mobile sources within the District's limited jurisdiction over these sources. A complete listing of the District's current rules and regulations is available at the following link: http://www.valleyair.org/rules/1ruleslist.htm

For the recently adopted *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards* 2018 PM2.5 Plan, the District performed an exhaustive evaluation of all potential additional opportunities for reducing emissions and committed to amend several rules to achieve expeditious attainment of the health-based federal PM2.5 air quality standards (see Chapter 4). This comprehensive analysis also demonstrated that the District's rules and regulations are at least as stringent, if not more stringent, than all other rules in the nation. Furthermore, in accordance with AB 617 requirements, the District adopted an expedited schedule in December, 2018, for performing further determination of BARCT to ensure that applicable sources are utilizing the cleanest technologies feasible (see Chapter 4).

District New and Modified Stationary Source Review

Beyond District rules that apply to specific categories of stationary sources, District Rule 2201 (New and Modified Stationary Sources Review) applies to all new stationary sources and all modifications to existing stationary sources that are subject to District

permit requirements. District Rule 2201, and the associated permitting process, ensure that new or modified stationary sources of air pollution are subject to the most effective emissions controls feasible for implementation; that emissions from the project do not create a public health risk (including a modeled analysis of cancer risks resulting from the project and possible health hazard risks resulting from both acute and chronic exposure to emissions for nearby residences and worksites); and that the project does not increase the potential for a violation of State or National Ambient Air Quality Standards. More information about the District's rigorous permitting process is available at http://www.valleyair.org/busind/pto/ptoprocess.htm, and is also summarized below.

Under Rule 2201, new facilities or facilities modifying equipment must obtain an Authority to Construct (ATC) permit prior to construction, and are subject to stringent requirements, including:

- Best Available Control Technology (BACT)
- Risk Management Review (RMR)
- Toxic Best Available Control Technology (T-BACT)
- Ambient Air Quality Analysis (AAQA)

Best Available Control Technology (BACT): For each emissions unit (specific piece of equipment) that has the potential to emit over the 2 lbs/day BACT threshold, the District requires the use of the best available air pollution control technology commonly used to control emissions from similar types of equipment. The District also conducts an analysis to determine if, based on specific criteria, cleaner technologies that are not commonly used for these type of equipment could be used to further reduce emissions from the proposed equipment. This very stringent requirement ensures that the most effective air pollution control technique is utilized resulting in reduced public exposure to air pollutants and toxic air contaminants.

As a part of the District's BACT Policy, District staff maintain a BACT Clearinghouse, updated and published quarterly, that includes available control technologies and operation methods that meet one of the following conditions:

A. The control technologies or operation methods have been achieved in practice for an emissions unit and class of source; or
B. Are contained in any SIP approved by the EPA for an emissions unit category and class of source; or
C. Are any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found to be technologically feasible for such class or category of sources or for a specific source.

AB 617 legislation requires that CARB develop and maintain a state-wide Technology Clearinghouse for BACT and T-BACT. Once available, District staff will review the Technology Clearinghouse as an additional resource when updating the District's BACT Clearinghouse.

Risk Management Reviews: The District conducts Risk Management Reviews to ensure that the public exposure to toxic air contaminants from projects required to obtain an ATC is less than significant. Very complex computer models and the most conservative assumptions are used to assess the project's maximum impact on resident's health. Projects resulting in estimated significant health risk for the public are not approved. Additional information regarding risk management reviews may be found here: https://www.valleyair.org/policies_per/Policies/apr-1905.pdf

Toxic Best Available Control Technology (T-BACT): When T-BACT is triggered under a Risk Management Review analysis, the District conducts a T-BACT analysis to ensure the most stringent control technique is utilized resulting in reduced public exposure to toxic air contaminants. T-BACT is required for units emitting air toxic emissions that result in a cancer risk of greater than one-in-a-million for nearby residences or businesses. Projects resulting in estimated significant health risk for the public are not approved.

Ambient Air Quality Analysis (AAQA): The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively, for numerous pollutants. Under Rule 2201, the District conducts AAQAs to ensure that project related emissions would not cause or make worse a violation of the State or National ambient air quality standard. This analysis ensures that the public exposure to certain criteria air pollutants is less than the maximum allowed concentration in outdoor air without harm to public.

AB 2588 (Air Toxics Hot Spots Information and Assessment Act)

The District's implementation of AB 2588, California's Air Toxics "Hot Spots" Information and Assessment Act, has resulted in dramatic reductions in emissions of air toxics from existing sources in the San Joaquin Valley. Under this right-to-know law, the District has worked with approximately 5,700 Valley facilities to quantify emissions of air toxics, determine the health risk caused by those emissions, report emissions and any significant risks through written public reports and neighborhood public meetings, and take steps to reduce such risks. As a result of these efforts, and the subsequent reductions in air toxics, since 2007 there have been no Valley facilities identified that pose a significant risk to any Valley resident under the "Hot Spots" program. A detailed discussion of AB 2588 and facility risk reduction audits conducted to date in the community is included in Chapter 4.

Implementation of State Airborne Toxic Control Measures

The District's integrated air toxics program incorporates Airborne Toxic Control Measure (ATCM) regulations promulgated by CARB. State-issued ATCMs are designed to reduce toxic air emissions from various types or categories of equipment by imposing prescribed air pollution control measures. Implementing ATCMs result in reductions of toxics exposure from targeted facility types or categories that could cause significant risks at a regional level. These ATCMs are implemented primarily through the District's permitting process. Examples of emissions sources that have drastically reduced toxic air contaminant emissions in the San Joaquin Valley because of such rules and regulations

include dry cleaners, chrome plating operations, gas stations, and diesel internal combustion engines.

Implementation of Federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) Standards

The District's integrated air toxics program fulfills federal mandates under Title III of the federal Clean Air Act, which requires specific types of sources of air toxic emissions to directly reduce emissions through federal NESHAP and MACT standards. These standards apply to a variety of source categories, ranging from diesel internal combustion engines to chrome platers, and from refineries to power plants.

Implementation of Federal New Source Performance Standards (NSPS)

The District also fulfills federal mandates under Title I of the federal Clean Air Act, which requires specific types of new, modified, and reconstructed facilities subject to NSPS to directly reduce emissions of criteria air pollutants. These standards apply to a variety of source categories, ranging from hot mix asphalt facilities to sewage treatment plants, and from landfills to boilers.

District Indirect Source Requirements

District Rule 9510 is the only rule of its kind in the State of California and throughout the nation which applies to new residential and commercial development projects. The District's rule is recognized as the benchmark, or best available control, for regulating these indirect sources of emissions, such as from construction equipment and mobile sources associated with new developments. This rule requires mitigation of the growth in emissions from mobile and area sources associated with construction and operation of new development projects in the Valley.

District Air Quality Assistance and Guidance to Public Agencies

The District provides assistance and guidance to other public agencies, including cities and counties in the San Joaquin Valley, to help them assess, minimize, and mitigate air quality impacts of projects undergoing their land-use approval processes, over which the District has no statutory authority. For instance, the District provides comments under the California Environmental Quality Act (CEQA) to public agencies on hundreds of proposed projects each year. District provided CEQA comments are designed to minimize project related air quality impacts. In addition, the District maintains and makes available an extensive suite of guidance documents and tools for assessing and mitigating air quality impacts, including criteria and air toxic emissions, from stationary source projects and other development projects.

Mobile Source Regulations

Mobile source emissions make up over 85% of the Valley's NOx emissions, the primary driver in the formation of particulate and ozone pollution, therefore, reductions in mobile source emissions have become an ever-increasingly important part of the Valley's attainment strategy of federal air quality standards. States and the federal government, unlike the District, have the authority to directly regulate tailpipe emissions from mobile sources. CARB has adopted toughened regulations for heavy-duty trucks, off-road

equipment, and other mobile sources. Additionally, the District has adopted innovative regulations such as the Indirect Source Review and Employer-based Trip Reduction rules to reduce emissions from mobile sources within the District's limited jurisdiction over these sources. Local air districts do not have the authority to implement regulations requiring ultra-low tailpipe emissions standards on mobile sources.

With authority to regulate mobile source emissions, CARB has adopted and amended a number of regulations aimed at reducing exposure to diesel PM and NOx from fuel sources, freight transport sources like heavy-duty diesel trucks, transportation sources like passenger cars and buses, and off-road sources like large construction equipment. Phased implementation of these regulations will produce emission reduction benefits in the coming years as the regulated fleets are retrofitted, and as older and dirtier fleet units are replaced with newer and cleaner models at an accelerated pace. CARB's ongoing comprehensive measures to reduce emissions from mobile sources throughout the state are detailed further in Chapter 4, "Statewide Strategies" section.

BARCT EXPEDITED SCHEDULE

In addition to community monitoring and emission reduction program requirements, AB 617 requires that air districts located in non-attainment areas perform a Best Available Retrofit Control Technology (BARCT) analysis for all categories of units at facilities subject to the state Cap-and-Trade program. In accordance with AB 617 requirements, the District adopted an expedited schedule for performing further determination of BARCT requirements in December 2018.

The District utilized an extensive evaluation process to make an initial determination of whether the rules that apply to Cap-and-Trade facilities meet all state BARCT requirements, as mandated by AB 617. While District rules are expected to meet BARCT due to the District's ongoing extensive regulatory evaluations, the proposed BARCT implementation schedule includes commitments to establish updated BARCT determinations for District rules as required under AB 617. The proposed schedule was prepared through a public process, which included two public workshops. In addition to the BARCT implementation schedule, the District will be proceeding with amending a number of District rules included as commitments in the District's *2018 PM2.5 Plan*, as discussed earlier in the CERP, that are also subject to the AB 617 BARCT implementation requirement.

In conjunction with District rules applicable to stationary source equipment, under the District's New Source Review permitting regulation, new facilities or facilities modifying equipment that emit air pollutants greater than 2 pounds per day (lbs/day), are subject to stringent emissions control requirements. For each piece of equipment that has the potential to emit over the 2 lbs/day threshold, the District requires the use of the best available air pollution control technology (BACT) used to control emissions from similar types of equipment. As part of this BACT analysis, the District determines if cleaner technologies that are not generally used for the equipment being analyzed could be used to further reduce emissions from the proposed equipment. This very stringent requirement ensures that the most effective air pollution control technique is utilized, resulting in the least amount of air pollution possible.

In addition to these stringent requirements on new sources of air pollution, rules adopted in the San Joaquin Valley are regularly analyzed for compliance with the state's BARCT requirements.

Best Available Retrofit Control Technology (BARCT)
Existing stationary sources in non-attainment areas such as the San Joaquin Valley have been subject to BARCT requirements since the 1980s, as opposed to some nonattainment areas in California relying on market-based criteria pollutant emission reduction programs and where facilities were not required to comply with BARCT. Although AB 617 does not specifically define BARCT, California Health and Safety Code (CH&SC) Section 40406 defines BARCT as follows:

Best Available Retrofit Control Technology (BARCT) is an air emission limit that applies to existing sources and is the maximum degree of reduction achievable, taking into

account environmental, energy and economic impacts by each class or category of source.

Unlike other regions in the state, the District has not relied on market-based systems such as South Coast AQMD's RECLAIM program to achieve regional emissions reductions needed for attainment. Such market-based systems allow sources of pollution to avoid installing BARCT-level controls if regional emissions are reduced at an established rate. This potential path to avoiding installing the best air pollution controls in other air districts was a significant portion of the genesis of this BARCT requirement of AB 617.

In contrast, businesses in the San Joaquin Valley have always had to comply with BARCT in accordance to the implementation schedules established in District rules. When developing attainment plans or amending prohibitory rules, the District evaluates all applicable sources of emissions for potential strategies to reduce emissions. These evaluations include an exhaustive search of air quality regulations throughout the nation, review of existing emission control technologies, and analysis of advanced emission control technologies that may soon be available, to identify potential technologically and economically feasible emission reduction measures. The District's attainment planning efforts rely on these processes to demonstrate on an ongoing basis that District rules meet state and federal emission control requirements, including BARCT and Most Stringent Measures, which exceeds BARCT requirements. Therefore, given the District's ongoing and extensive work to identify and apply most stringent measures necessary to attain the ever-tightening federal health-based standards under the Clean Air Act, it is anticipated that most if not all District rules satisfy BARCT requirements.

The District recognizes that emission control technologies are continually evolving, and therefore, robust and ongoing analysis is necessary to demonstrate that the District's rules continue to meet BARCT and other requirements on an ongoing basis. Furthermore, in the context of the 2016 Ozone attainment plan, the adopted PM2.5 attainment plan, and upcoming plans, future rule development actions will be required and, in this process, rules that have recently been determined to meet BARCT during this AB 617 analysis may be subject to further analysis to ensure they continue to meet BARCT requirements. Additionally, in those instances where the District is made aware of new technology, further case specific and rule specific BARCT determinations may be conducted.

Affected Rules Included in the District's Expedited BARCT Implementation Schedule

As captured in Section 40920.6 of the Health and Safety Code, AB 617 identifies specific requirements for the District to meet when establishing the expedited BARCT implementation schedule. AB 617 requires the schedule to apply to each industrial source that, as of January 1, 2017, was subject to a specified market-based compliance mechanism and give highest priority to those permitted units that have not modified emissions-related permit conditions for the greatest period of time.

Based on information provided by CARB, as of January 1, 2017, 109 facilities within the

District were identified as being subject to the state Cap-and-Trade program for greenhouse gas emissions, a market-based compliance mechanism adopted by the state board pursuant to subdivision (c) of Section 38562, and therefore AB 617 BARCT requirements. Evaluating the 109 affected facilities, the District identified that approximately 4,500 active permit units are within the scope of this BARCT analysis. From the 4,500 active permit units, the District determined that 32 District rules that apply to specific source categories of equipment were subject to the BARCT analysis required under AB 617.

District staff performed analysis of 32 affected rules and determined that:

- 5 rules were superseded by a more stringent rule known to meet BARCT or by a rule subject to further BARCT analysis,
- 5 rules were determined to meet Most Stringent Measures (MSM) for NOx, the only relevant pollutant for these affected rules and, therefore, meet BARCT, and
- 19 rules were specifically determined to meet BARCT through an extensive rule and source category evaluation that compared our rule requirements with federal and state air quality regulations and with regulations of other air districts in California.
- While the remaining 13 rules likely already meet BARCT due to the District's ongoing and extensive regulatory evaluations and enhancements, the proposed BARCT implementation schedule includes commitments to establish updated BARCT determinations for these rules, which will occur in the 2020-2022 timeframe.

Prioritization Criteria for Expedited BARCT Analysis Schedule

Section 40920.6(c)(3) of the Health and Safety Code requires Districts to give highest priority to conduct the BARCT analysis to those rules affecting permitted units that have not modified emissions-related permit conditions for the greatest period of time. To assist in further prioritization, the District also considered local public health, clean air benefits to the surrounding community, and regional air quality and attainment benefits by prioritizing units that emit NOx and are located within communities selected for action under AB 617. In addition, while cost-effectiveness of controls can't be fully analyzed until each rule is addressed during the development of a BARCT rule, the District also prioritized rules with the greatest number of potentially affected units, which, when coupled to the law's requirement of prioritizing based on the length of time since the units were last modified, provides some consideration of the most likely controls to be cost-effective.

Public Process

As a part of the public process associated with establishing this schedule, the District conducted a public scoping meeting on June 14, 2018, to solicit input from stakeholders regarding the District's proposed methodology to address the AB 617 requirement to adopt an expedited BARCT analysis schedule by the end of 2018.

The District held a public workshop on November 1, 2018, to solicit input from the stakeholders regarding the Districts proposed expedited BARCT Rule implementation

schedule. No comments were received from stakeholders after this workshop.

In addition, the District held a public workshop on July 30, 2020, to provide an update on the BARCT analysis of District rules as required under AB 617 and the District's Expedited BARCT Implementation Schedule.

Expedited BARCT Implementation Schedule
Through this public process and in accordance with AB 617 requirements, the District has adopted the following expedited BARCT implementation schedule:

Table 3-6 District Expedited BARCT Schedule

Rule	Title	BARCT Determination Status	BARCT Determination Schedule	BARCT Rulemaking Schedule (if necessary)
4454	Refinery Process Unit Turnaround	Rule determined to meet BARCT	2019	---
4641	Cutback, Slow Cure, And Emulsified Asphalt, Paving And Maintenance Operations	Rule determined to meet BARCT	2019	---
4104	Reduction of Animal Matter	Rule determined to meet BARCT	2019	---
4409	Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities	BARCT evaluation completed, rule development process necessary	2019	Public workshop held March 10, 2022. Development process to be completed in 2022.
4455	Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants	BARCT evaluation completed, rule development process necessary	2019	

Rule	Title	BARCT Determination Status	BARCT Determination Schedule	BARCT Rulemaking Schedule (if necessary)
4702	Internal Combustion Engines (VOC only)	Scheduled (in conjunction with PM2.5 Plan commitment)	2020	Rule adopted August 2021
4623	Storage of Organic Liquids	BARCT evaluation completed, rule development process necessary	2020	Public workshop held March 10, 2022. Development process to be completed in 2022.
4694	Wine Fermentation and Storage Tanks	Rule determined to meet BARCT	2020	-----
4624	Transfer of Organic Liquid	BARCT evaluation completed, rule development process necessary	2020	Public workshop held March 10, 2022. Development process to be completed in 2022.

Rule	Title	BARCT Determination Status	BARCT Determination Schedule	BARCT Rulemaking Schedule (if necessary)
4603	Surface Coating of Metal Parts and Products, Plastic Parts and Products, and Pleasure Crafts	Rule determined to meet BARCT	2020	----------
4601	Architectural Coatings	Rule determined to meet BARCT	2020	---------
4401	Steam-Enhanced Crude Oil Production Wells	BARCT evaluation completed, rule development process necessary	2021	Public workshop held March 10, 2022. Development process to be completed in 2022.
4566	Organic Material Composting Operations	Scheduled	2021	-------
4625	Wastewater Separators	Scheduled	2021	-------
4621	Gasoline Transfer Into Stationary Storage Containers, Delivery Vessels, and Bulk Plant	Scheduled	2021	--------

Rule	Title	BARCT Determination Status	BARCT Determination Schedule	BARCT Rulemaking Schedule (if necessary)
4402	Crude Oil Production Sumps	Scheduled	2021	------
4351	Boilers, Steam Generators, and Process Heaters - Phase 1	Rule superseded by more stringent rules, District Rules 4305, 4306, and 4320	--------	--------
4405	Oxides of Nitrogen Emissions from Existing Steam Generators Used in Thermally Enhanced Oil Recovery - Central and Western Kern County Fields	Rule superseded by more stringent rules, District Rules 4305, 4306, and 4320	---------	--------
4406	Sulfur Compounds from Oil-Field Steam Generators - Kern County	Rule superseded by more stringent rules, District Rules 4305, 4306, and 4320	--------	--------
4305	Boilers, Steam Generators, and Process Heaters - Phase 2	Rule superseded by District Rules 4306 and 4320, more stringent rules	--------	--------
4701	Internal Combustion Engines - Phase 1	Rule superseded by District Rule 4702, a more stringent rule	--------	--------

Rule	Title	BARCT Determination Status	BARCT Determination Schedule	BARCT Rulemaking Schedule (if necessary)
4309	Dryers, Dehydrators, and Ovens	Rule determined to meet BARCT	--------	--------
4703	Stationary Gas Turbines	Rule determined to meet BARCT	--------	--------
4306	Boilers, Steam Generators, and Process Heaters - Phase 3	Rule determined to meet BARCT	--------	--------
4307	Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr	Rule determined to meet BARCT	--------	--------
4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr	Rule determined to meet BARCT	--------	--------
4311	Flares	Rule determined to meet BARCT	--------	--------
4354	Glass Melting Furnaces	Rule determined to meet BARCT	--------	--------
4408	Glycol Dehydration Systems	Rule determined to meet BARCT	--------	--------

Rule	Title	BARCT Determination Status	BARCT Determination Schedule	BARCT Rulemaking Schedule (if necessary)
4453	Refinery Vacuum Producing Devices or Systems	Rule determined to meet BARCT	--------	--------
4612	Motor Vehicle and Mobile Equipment Coating Operations	Rule determined to meet BARCT	--------	--------
4622	Gasoline Transfer into Motor Vehicle Fuel Tanks	Rule determined to meet BARCT	--------	--------

UPCOMING PM2.5 PLAN RULE AMENDMENT EFFORTS

In addition to the BARCT implementation schedule above, the District will be proceeding with amending two District rules to pursue additional emission reduction opportunities beyond BARCT, included as commitments in the District's *2018 PM2.5 Plan* adopted by CARB into the State Implementation Plan:

Emissions reductions achieved through the implementation of more stringent limits potentially required through these rule amendments will further contribute to reduced exposure to air pollution in the community. Community Steering Committee members, members of the AB 617-selected community, and the general public are encouraged to be involved in the upcoming rulemaking process for these rules.

Table 3-7 Scheduled District Rule Amendments to Reduce PM2.5

Rule	Title	BARCT Status	PM2.5 Plan Rulemaking Schedule
4901	Wood Burning Fireplaces and Wood Burning Heaters	No units subject to AB 617 BARCT analysis. Rule amended in June, 2019.	2019 (Completed)

Rule	Title	BARCT Status	PM2.5 Plan Rulemaking Schedule
4311	Flares	Rule meets or exceeds BARCT	2020 (Completed)
4306 and 4320	Boilers, Steam Generators, and Process Heaters - Phase 3 and Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr	Rule meets or exceeds BARCT	2020 (Completed)
4692	Commercial Charbroiling	No units subject to AB 617 BARCT analysis	2020 (Completed)
4702	Internal Combustion Engines	Rule meets or exceeds BARCT for NOx, updated AB 617 BARCT determination scheduled for VOCs	2021 (Completed)
4352	Solid Fuel-Fired Boilers, Steam Generators and Process Heaters	No units subject to AB 617 BARCT analysis	2021 (Completed)
4354	Glass Melting Furnaces	Rule meets or exceeds BARCT	2021 (Completed)

Further information on the District's expedited BARCT schedule and rule analyses can be found in the staff report presented to the District Governing Board in December, 2018:
http://www.valleyair.org/Board_meetings/GB/agenda_minutes/Agenda/2018/December/final/13.pdf

PERMITTING: BACT AND T-BACT DETERMINATIONS

The California Air Resources Board (CARB) is developing a Technology Clearinghouse of best available control technology (BACT) and best available control technology for toxic air contaminants (T-BACT) determinations for air districts throughout California. The District will use this Technology Clearinghouse as an additional resource for BACT determinations, and will reference this information when developing BACT and T-BACT technology determinations for any new or modified source permitting processes, including those in the Arvin/Lamont community. More information about the District's stringent new and modified source review process is available in Chapter 3.

FACILITY RISK REDUCTION AUDITS UNDER AB 2588 (AIR TOXICS HOT SPOTS INFORMATION AND ASSESSMENT ACT)

Background
The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) was enacted in September 1987. Under this act, stationary sources are required to report the types and quantities of certain toxic substances their facilities routinely release into the air. The goals of the Air Toxics "Hot Spots" Act are to:

- Identify Valley facilities that release toxic air contaminants as a result of their day-to-day operations
- Collect and quantify emission data from equipment located at permitted facilities
- Identify facilities causing localized health impacts on nearby residents,
- Determine facility-wide health risks resulting from the emission of toxic air contaminants
- Notify nearby residents and businesses of significant risk facilities in their vicinity
- Require significant risk facilities to reduce their risks below the level of significance in accordance with the provisions of the "Emissions Inventory Criteria and Guidelines Report" adopted by the Air Resources Board

District's Implementation of AB 2588
The District's implementation of AB 2588, California's *Air Toxics "Hot Spots" Information and Assessment Act*, has resulted in major reductions in emissions of air toxics from existing sources in the San Joaquin Valley. Under this right-to-know law, the District has worked with Valley facilities to quantify emissions of air toxics, determine the health risk caused by those emissions, report emissions and any significant risks through written public reports and neighborhood public meetings, and take steps to reduce such risks. As a result of this effort, and the resulting emissions reductions, no Valley facility currently poses a significant risk under this program.

The District's integrated air toxics program fulfills the state AB 2588 Hot Spots mandates, aimed at quantifying and assessing localized health risk, notifying affected residents, and reducing risk from facilities with high risk caused by air toxic emissions. In addition, the District's integrated air toxics program incorporates Airborne Toxic Control Measure (ATCM) regulations promulgated by the Air Resources Board, requiring prescribed control measures for various source categories that cause significant risks at a regional level. Furthermore, the District's integrated program fulfills federal mandates under Title III of the federal Clean Air Act, requiring Maximum Available Control Technology (MACT) for sources of air toxics.

In addition to the state and federal mandates, the District's integrated air toxics program also implements the more stringent local permitting and California Environmental Quality Act (CEQA) requirements, specifically to ensure installation of Best Available Control Technology (BACT) for air toxics and that new permits or modifications to existing facilities will not result in a significant increase in health risk to the public.

The District has spent the last two decades implementing a wide variety of methods to

reduce toxic air contaminant emissions in the San Joaquin Valley. Based on the latest California Toxics Inventory, 52% of toxic air contaminants come from mobile sources such as cars and trucks, 34% are emitted from area-wide sources like road dust, paints, solvents, and other consumer products, and 14% of all air toxics in the San Joaquin Valley are emitted from stationary sources of pollution under the direct control and regulation of the District. Mobile and area-wide sources of emissions are generally under the regulatory authority of the State of California and the federal government.

The District's integrated approach to addressing and reducing risks from toxic air contaminants has taken three main paths:

- Reducing air toxic emissions from existing stationary sources of emissions,
- Preventing the creation of new or modified stationary sources of significant risk, and
- Finding creative and cooperative methods of reducing risk from emissions sources that the District does not typically regulate.

In 2016, the District began implementing the state Office of Environmental Health Hazard Assessment's (OEHHA's) revised Guidance on Preparation of Health Risk Assessments that was adopted by OEHHA in early March 2015. Following OEHHA revised guidelines, the District began a health risk reassessment of all facilities located in the San Joaquin Valley. The health risk reassessment follows the phased processing schedule outlined in AB 2588, which was originally implemented in the late 80's and early 90's. AB 2588 subjected three major categories (or phases) of facilities to the regulation based upon their level of annual emissions. The AB 2588 regulation also allows for "Industry-wide" toxics emissions inventory, which consist of facilities that are small businesses where emissions can be generally characterized such as Gasoline Dispensing, Auto Body Coating, etc.

Reassessment of facilities subject to the AB 2588 Hot Spots regulation is a multi-year process that started in 2016, following the phases identified below:

- Phase I Facilities (≥ 25 tons emissions per year)
- Phase II Facilities (10 ≤ tons emissions per year < 25)
- Phase III Facilities (< 10 tons emissions per year)
- Phase IV Facilities (Industry-wide, DICE only, Ag facilities)

Prioritizing Facility Health Risks

Based on the emissions inventory, the District is prioritizing each facility's health risk based on established statewide guidelines using a computerized modeling program. A "prioritization" is a conservative health risk assessment screening analysis, resulting in a facility prioritization score used to determine if a more refined health risk assessment is necessary based on the results of the modeling program. As part of this process, very conservative assumptions are utilized, with many safety factors built in to determine the worst-case health risk to possible receptors. The purpose of these safety factors is to ensure that the most sensitive receptors (children, elderly, pregnant women, and people with weakened immune systems) are protected. Facilities ranked as high priority are

required to perform health risk assessments. The District prioritizes and ranks the health risk posed by a facility as "low", "intermediate", or "high" priority, based on the following:

- **Low Priority:**
  Prioritization Score ≤ 1
  Facility Exempt from further AB 2588 requirements

- **Intermediate Priority:**
  1 < Prioritization Score ≤ 10
  Facility required to provide updated summary every four years

- **High Priority:**
  Prioritization Score > 10
  Facility required to perform a refined Health Risk Assessment

Health Risk Assessment Process
When a facility's prioritization score exceeds 10, the facility is classified as "High Priority" and a Health Risk Assessment (HRA) is required for the facility, and such facility is required to submit an HRA for District approval. The District and State Office of Environmental Health Hazard Assessment (OEHHA) are required by the Air Toxics "Hot Spots" Act to review each HRA. Understanding that risk calculations involves a level of uncertainty due to limited data in many areas requiring the use of assumptions. With a focus on health protection, very conservative assumptions are utilized, with many safety factors built in to determine the worst-case risk to possible receptors. The purpose of these safety factors is to ensure that the most sensitive receptors (children, elderly, pregnant women, and people with weakened immune systems) are protected. Therefore, while the actual risk may be much less than the calculated risk, it is very unlikely to be higher than calculated.

Upon approval of facility HRA, the District determines the facility's health risk status, which is classified as a low risk, intermediate risk, high risk, or risk reduction required, based on the following HRA scores:

- **Low Risk:**
  HRA cancer risk ≤ 1 in a million, and HRA total hazard index of < 0.1
  Facility Exempt from further AB 2588 requirements

- **Intermediate Risk:**
  1 ≤ HRA cancer risk < 10 in a million, or ≤ HRA total hazard index ≤ 1.0
  Facility required to provide update summary on a quadrennial basis

- **High Risk:**
  HRA cancer risk ≥ 10 in a million, or HRA total hazard index of > 1.0
  Public Notice Required

- **Risk Reduction Required:**
  HRA cancer risk ≥ 100 in a million, or HRA total hazard index of > 5.0

Public Notice and Risk Reduction Audit Plan Required

Facilities that pose health risks above District action levels are required to submit plans to reduce their risk. The Risk Reduction Audit Plan (RRAP) trigger level for cancer risk is 100 cases per million exposed persons, based on the maximum exposure beyond facility boundaries at a residence or business. The action level (Risk Reduction Audit Plan) for non-cancer risk is a hazard index of 5 at any point beyond the facility boundary where a person could reasonably experience exposure to such a risk.

The District's review of completeness of the facility's RRAP includes a substantive analysis of the emission reduction measures included in the plan, and the ability of those measures to achieve emission reduction goals as quickly as feasible. If the District determines that the RRAP does not meet those requirements, the District shall remand the audit and plan to the facility and specify the deficiencies. A facility operator shall submit a RRAP addressing the deficiencies identified by the District within 90 days of receipt of a deficiency notice. An updated prioritization and/or health risk assessment shall be determined based on the approved RRAP.

Risk Reduction Audit and Plan Facilities within the District
Based on facility information, no District permitted facilities in the Arvin-Lamont AB 617 community present a significant risk for toxic air pollutants and are not required to perform a Risk Reduction Audit and Plan.

AB 617 Community Facility Lists with Associated AB 2588 Designations
Assembly Bill 617 requires the CARB and air districts to develop and implement emissions reporting for disadvantaged communities. With the establishment of the selected community boundaries, the District has put into effect a plan to expedite and streamline the AB 2588 reassessments for facilities located within the selected community of Arvin/Lamont.

Community-Based AB 2588 Reassessments
Based on previous AB 2588 analyses and on the on-going District's integrated air toxics program, no Valley facilities have been determined to pose significant risk. Therefore, no existing facility(s) have or have been required to prepare a Risk Reduction Audit Plan. However, as mentioned above, the District is currently in the process of reassessing Valley facilities under AB 2588, which includes those located in the selected community of Arvin/Lamont.

Please refer to Appendix E for further details about the District's Health Risk Assessment Process, and a table identifying the AB 2588 reassessment status of each facility within the community as of December 21, 2021.

DISTRICT INCENTIVE-BASED EMISSION REDUCTION PROGRAMS

The District has increasingly relied on its advocacy efforts to secure state and federal funding sources, and locally-generated funding to implement incentive programs that have become a vital component of the District's overall strategy for achieving the emissions reductions necessary to bring the Valley into attainment with state and federal air quality standards and to protect public health. These programs provide an effective way to accelerate emissions reductions and encourage technology advancement, particularly from mobile sources, a sector not directly under the District's regulatory jurisdiction. Considering over 85% of the NOx emissions in the Valley come from mobile sources, these successful voluntary incentive grant programs help the Valley achieve highly cost-effective emissions reductions that are surplus of the regulatory emissions reductions.

The District operates one of the largest and most well-respected voluntary incentive programs in California. Since the District's inception in 1992, considerable funding has been invested into thousands of clean-air projects throughout the Valley. The District's incentive programs offer Valley businesses and residents the opportunity to replace their older, higher polluting equipment with newer, cleaner models. These incentive programs include options for replacing older diesel powered trucks, ag engines, tractors, locomotives, and construction equipment as well as options for replacing wood burning devices, lawn equipment and passenger vehicles. These projects have achieved significant emissions reductions with corresponding air quality and health benefits. The incentive programs listed in the table below have been implemented in the community of Arvin/Lamont AB 617 Community from 2005 to March 28, 2022, achieving over 2,000 tons of combined PM, NOx, and VOC emissions reductions in the community.

Table 3-8 Grant Funding Invested in Arvin/Lamont AB 617 Community- from 2005 to Mar 28, 2022

Arvin/Lamont AB 617 Community Grant Funding: Incentive Program	Units	Sum of Grant Amount	Total Tons PM, NOx, VOC Emissions Reduced
Burn Cleaner Wood Stove Change Out New Device	19	$49,000.00	4.94
Heavy-Duty Ag Burn Alternative	52	$1,649,623.00	472.73
Heavy-Duty Ag-UTV Vehicle Replacement	39	$526,257.00	3.34
Heavy-Duty Ag-Engine Replacement	72	$1,282,214.00	191.66
Heavy-Duty Ag-Engine New Electric	8	$76,752.00	11.1
Heavy-Duty Infrastructure Alternative Fuel	2	$440,000.00	0.00
Heavy-Duty Off-Road Ag Vehicle Replacement	149	$4,389,503.00	707.2
Heavy-Duty Off-Road Engine Repower	24	$1,297,262.00	366.6

Arvin/Lamont AB 617 Community Grant Funding: Incentive Program	Units	Sum of Grant Amount	Total Tons PM, NOx, VOC Emissions Reduced
Heavy-Duty On-Road New Vehicle	7	$3,360,000.00	0.00
Heavy-Duty On-Road Prop 1B Vehicle Replacement	29	$1,270,000.00	169.3
Heavy-Duty On-Road TVP Vehicle Replacement	7	$334,825.00	67.1
Heavy-Duty School Bus Vehicle Replacement	6	$1,128,455.00	8.42
Heavy-Duty School Bus Engine Retrofit	64	$1,038,875.00	0.00
Lawn & Garden Residential New Purchase	4	$200.00	0.00
Lawn & Garden Residential Replacement	34	$8,200.00	0.00
Light-Duty Charge Up EV Charger-Private	7	$166,000.00	0.00
Light-Duty Charge Up EV Charger-Public	6	$300,000.00	0.00
Light-Duty Drive Clean EV Vehicle Rebate	24	$72,000.00	0.57
Light-Duty EFMP Replacement	37	$302,500.00	0.0
Light-Duty TITU Repairs	773	$437.940.13	0.0
Light-Duty Van Pool Voucher	7	$2,520	0.00
Public Benefit Alternative Fuel New Vehicle	60	$974,384.00	0.00
Special Projects Energy Efficiency Block Grant	4	$5,380.00	0.00
Total	**657**	**$18,748,930.00**	**2,002.97**

DISTRICT TECHNOLOGY ADVANCEMENT EFFORTS

The District Governing Board approved creation of the Technology Advancement Program in March 2010, to accelerate development of technologies that can help reduce emissions in the Valley. Meeting EPA's increasingly stringent ozone and PM2.5 air quality standards requires significant advancements in low-emissions technologies from mobile and stationary sources. The Technology Advancement Program provides a strategic and comprehensive means to identify, solicit, and support technology advancement opportunities. Ongoing refinement of the program's technology focus areas targets efforts to achieve the greatest impact on the Valley's attainment and other health-based goals. This program has resulted in the development and deployment of electric feed mixers for dairy operations, clean fuel technologies for trucks, and solar-electric truck refrigeration units.

PUBLIC AIR QUALITY EDUCATION AND OUTREACH

Providing accurate and up to date air quality information to Valley residents is a top priority for the District, especially when circumstances such as wildfires overwhelm all clean air measures and lead to high pollution concentrations. Under these circumstances, the best course of action is to provide notifications to Valley residents so that sensitive individuals, in particular, can take precautions to minimize exposure. The District has expended significant resources on public notification and risk prevention measures, such as the Real-Time Air Advisory Network (RAAN) and Real-Time Outdoor Activity Risk (ROAR) Guidelines. The following are some additional examples of District outreach programs designed to help Valley residents understand air quality and what they can do to reduce their own impacts:

- Healthy Air Living Schools
  - http://www.healthyairliving.com/schools
- Real-Time Air Quality Display (READ)
- Web-based Archived Air Quality System (WAAQS)
  - https://www.valleyair.org/waaqs/
- Healthy Air Living
  - http://www.healthyairliving.com/
- Healthy Air Living Partners
- Residential Wood Smoke Reduction
  - www.valleyair.org/burnstatus
- Air Alerts
  - https://www.valleyair.org/AirAlert/AirAlert_Landing.htm

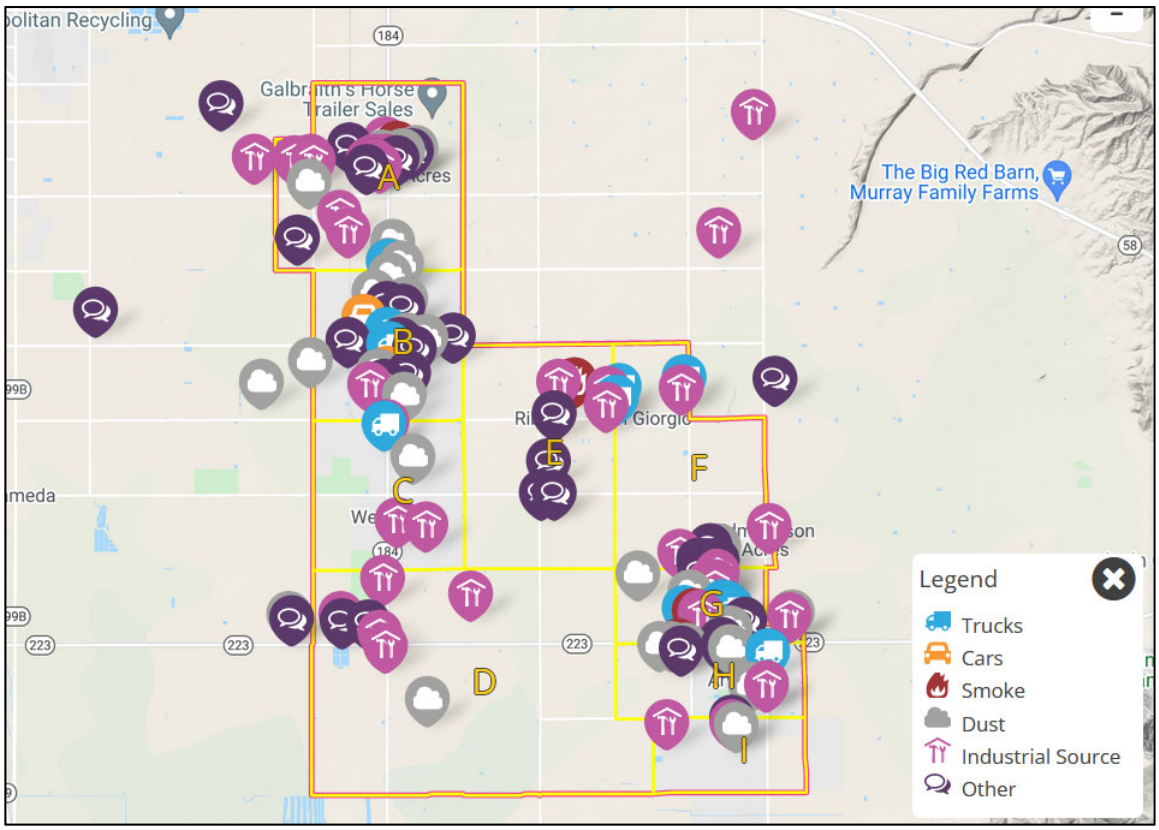
The above programs are available to community members, and have helped residents and school administrators take health protective action during poor air quality episodes.

4. STRATEGIES TO REDUCE THE CUMULATIVE EXPOSURE BURDEN IN ARVIN/LAMONT

COMMUNITY IDENTIFIED AIR QUALITY PRIORITIES

During the July 28, 2021 Community Steering Committee (CSC) meeting, Arvin/Lamont committee members participated in a facilitated exercise to identify and prioritize their air pollution sources of concern. Participants were placed in groups and were asked to share their thoughts regarding air pollution sources which they believed impacted their community the most, or was of most concern to the individual or entity they represented. The results of these group exercises were then placed into an online mapping tool to create a visual representation of the common pollution sources of concern (Figure 4-1). An online version of the exercise was also sent to the committee and posted to the District's community webpage http://community.valleyair.org to allow for additional opportunity to participate in identifying source categories of concern.

Figure 4-1 Results of Sources of Concern Exercise



Through these exercises, some top emission sources categories of concern in Arvin/Lamont included in below figure.

Figure 4-2 Top Sources of Concern as Identified by Arvin/Lamont Community Steering Committee

Based on emissions inventory, current air monitoring data, and top sources of concern in this community, pollutants of concern include particulate matter less than 2.5 micrometers in diameter (PM2.5), Black Carbon (BC), Oxides of Nitrogen (NO, NO2, NOx), Hydrogen Sulfide (H2S), Carbon Monoxide (CO), Ozone, Volatile Organic Compounds (VOCs), and pesticides. In addition, a variety of toxic compounds, including toxic organics and particulate matter, were also identified as pollutants of concern.

To provide additional information about existing control programs for community members not familiar with ongoing air pollution control efforts, District coordinated various agency presentations from District permits and enforcement staff, California Air Resources Board (CARB) regulatory and enforcement staff, Department of Pesticide regulation (DPR), and other local agencies. Additionally, the CSC-elected community co-

leads were invited to present their perspectives as community representatives in the form of formal presentations during CSC meetings.

In partnership with the CSC members, community based organizations, businesses in the community, and state and local agencies, a suite of targeted strategies to reduce and mitigate harmful air pollution emissions from community identified sources of concern has been developed. Some of which were suggested by the District and CARB in response to CSC identified sources of concern, and many of which came directly through suggestions made by CSC members. In addition to the emission reductions which will be achieved through expedited implementation of best available retrofit control technology by facilities within the community, the adoption of rule amendments that will further reduce PM2.5 and toxics in the Valley, and enhanced enforcement (additional/targeted enforcement efforts) in the community, these local measures provide accelerated emissions reductions in the community.

AB 617 legislation requires that a CERP identify cost-effective measures to achieve emission reduction targets in the community. During CSC discussions to review potential strategies for implementation in the community, CSC members consistently supported and prioritized measures that would reduce emissions from residential sources, while also providing tangible benefits to residents in the community. The measures described in this chapter encompass a range of strategies to reduce community level exposure burden, including regulatory, enforcement, outreach and education, voluntary incentive-based programs, as well as partnerships with other agencies to address issues outside of the District's direct regulatory authority.

It should be noted that the identified funding amounts for each measure are designed assuming that future-year state budget appropriations and funding allocations are similar to those approved by the legislature and CARB for current use in the AB 617 program, and are available in future District budget appropriations.

Incentive program guidelines also generally contain strict requirements that include specific project types and funding amounts. Some of the incentive measures included in the CERP are proposed to operate under existing authority and approved program guidelines, while other measures will require the development of new program guidelines and associated approval by the District Governing Board and CARB. As the CARB Blueprint states, CARB and the District will continue developing regulatory and incentive actions through separate public processes. Subsequent implementation of proposed CERP measures will be conditional on the successful completion of applicable public processes, necessary financing approvals, technical feasibility analyses, economic competitiveness, safety, and environmental reviews.

ONGOING ENGAGEMENT AFTER CERP ADOPTION

The District will continue to work with the CSC to receive community input as program guidelines are developed and projects are implemented within the community To support implementation of the Arvin/Lamont CERP, the District, CARB, and other implementing agencies will coordinate with the CSC to establish subcommittees as needed to provide

more focused technical advisory support in the development of strategies approved under the CERP. In addition to the technical support provided by the District, CARB, and other supporting agencies, these subcommittees may provide opportunities for technical advisory support from third-party technical experts, including academia, engineers, technology providers, and others as necessary.

As experience is gained in implementing the measures contained in the CERP, it may become evident that certain measures are more successful than others in reducing emissions and/or exposure, and are more popular with the community. Committee input on these considerations, and discussions about funding availability and cost-effectiveness/benefits of these projects, may lead to the CSC recommending adjustments to strategy goals and/or funding amounts to achieve overall emission reduction goals of the CERP. A possible example includes the collection and sharing of community air monitoring data, which could lead to additional discussion with the CSC, which could lead to additional CERP strategy development.

During CERP implementation, the CSC will be provided regular updates on implementation progress and their feedback and guidance requested. Based on the updates, it is possible that new strategies could be identified or revisions to existing strategies may be appropriate.

The sections that follow provide detailed information about emission and exposure reduction strategies developed for each source category of concern to the community.

4.1. INCENTIVES – HEAVY-DUTY MOBILE SOURCES & AG OPERATIONS

HEAVY DUTY MOBILE SOURCES IN ARVIN/LAMONT

There are a variety of heavy-duty mobile sources operating in and around the Communities of Arvin and Lamont, cluing on-road heavy-duty trucks, school and transit buses, and off-road equipment, including agricultural and construction equipment. This equipment is primarily powered by diesel engines and, depending on the specific category, is regulated by one or more statewide regulations.

Emissions from this source category are primarily from the internal combustion engines and include oxides of nitrogen (NOx) and combustion PM. Mobile sources account for more than 85% of the NOx inventory throughout the Valley (Appendix C – Source Apportionment and Community). In the Arvin/Lamont community, 165.30 tons per year of NOx, 10.64 tons per year of VOC and 4.40 tons per year of PM2.5 are attributed to on-road heavy-duty equipment. In addition, 32.50 tons per year of NOx, 5.47 tons per year of VOC and 1.88 tons per year of PM2.5 are attributed to off-road heavy-duty equipment referenced in these measures.

Figure 4-3 Examples of Heavy Duty Mobile Sources

COMMUNITY CONCERNS AND COMMENTS

During the committee discussions regarding heavy-duty mobile sources, a majority of the committee ranked this source as a high priority to address. Committee member comments and suggestions included providing incentives to replace older trucks, clean fleet requirements, and shifting trucking routes away from residents.

CURRENT CONTROL PROGRAMS

The District does not have regulatory authority of emissions from mobile sources, including heavy-duty vehicles and equipment, locomotives, school and transit buses. Diesel powered on-road heavy duty vehicles are subject to the statewide CARB Truck and Bus Regulation, which requires all equipment to get progressively cleaner over time. Off-road heavy-duty equipment is subject to the CARB Off-Road Regulation, which requires all fleets to be upgraded to newer, cleaner technologies over time.

Due to the large amount of pollution that can be attributed to mobile sources, the District has implemented a broad suite of voluntary incentive programs, targeted at reducing

emissions from heavy-duty engines operating throughout the Valley.

Heavy Duty Trucks/Buses:
The District currently offers a variety of programs targeted at replacing or upgrading older, high-polluting trucks and buses with cleaner technology.

- The Heavy Duty Truck Replacement Program http://valleyair.org/grants/truck-replacement.htm. This program provides incentives for the replacement of existing heavy-duty diesel trucks with new, zero or near-zero-emission technology.

- Program for Heavy-Duty Alternative Fuel Infrastructure, https://www.valleyair.org/grants/Clean-Vehicle-Fueling-Infrastructure-Program.htm, which provides local businesses and agencies incentive funding to install alternative fueling infrastructure (electric, natural gas, hydrogen, etc.) to support the increased deployment of heavy-duty advanced clean technology vehicles.

- Electric School Bus Incentive Program - http://valleyair.org/grants/electric-school- bus.htm. This program is operated by the District and provides incentives for the replacement of existing older, higher-polluting school buses with new, electric school buses.

- Volkswagen Mitigation Trust – http://vwbusmoney.valleyair.org/
  The VW Mitigation Trust has $130 million in funds to replace older, high-polluting transit, school, and shuttle buses with new battery-electric or fuel-cell buses.
  Replacing an older bus with a zero-emission bus eliminates particulate matter and other pollutants that impact children and residents riding the buses, as well as residents throughout California communities. This statewide program is being administered by the District.

Agricultural Equipment:
The District offers the following programs targeted at replacing or repowering agricultural equipment in the Valley:

- Heavy-Duty Program Agricultural Tractors - http://valleyair.org/grants/documents/tractor/Guidelines.pdf. Agricultural tractor replacements can be funded as an eligible project category utilizing funding provided to support AB 617. These projects are administered according to the Carl Moyer Program guidelines and are subject to additional requirements contained within the approved AB 617 Community Air Protection Guidelines. This program is operated by the District.

- FARMER Ag Truck Replacement Program - http://valleyair.org/grants/documents/FARMER/guidelines.pdf. This program

provides incentive funds for the replacement of heavy-duty diesel agricultural trucks. Eligible agricultural trucks must be in current compliance with the State of California's On-Road Truck and Bus Regulation. These projects are administered according to the FARMER Program guidelines and this program is operated by the District.

- Low-Dust Nut Harvester Incentive Program - http://valleyair.org/grants/low-dust-nut-harvester.htm. This program provides incentives for the replacement of older, conventional harvesters or sweepers with new, low-dust technology equipment. This incentive program helps to reduce dust emissions during harvest time, and can be packaged with the District's Tractor Replacement funding to upgrade tractors used to pull harvesting equipment.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Due to the priority that community members placed on reducing emissions from this source category and the large amount of emissions, including PM2.5 and toxic air contaminants (particularly diesel PM) that originate from heavy duty mobile sources in and around the community, the following strategies have been developed for implementation in the Arvin/Lamont community.

MEASURE 1.A HEAVY-DUTY TRUCK REPLACEMENT

Overview: The goal of this strategy is to reduce emissions from heavy-duty diesel trucks operating in the Arvin/Lamont community. This strategy would provide enhanced outreach and access to incentive funding for zero and near-zero emissions, clean truck technologies that are domiciled and operating within the community. District Board-approved methodology and funding levels can be utilized and the District will encourage small business owners to participate in the program while also promoting the selection of all-electric, zero emission technology. This measure would replace 30 older, heavy-duty diesel trucks operating in Arvin/Lamont with zero or near-zero emission technology at an expected average cost of $200,000 per truck. Where feasible and available for the truck type and duty-cycle, the District will prioritize funding for replacement with zero-emissions electric vehicle technologies. By reducing or eliminating emissions from heavy-duty diesel trucks, significant PM2.5, diesel particulate matter, and NOx emissions reductions can be achieved.

Implementing Agency: Valley Air District

Type of Measure: Incentives

Budgeted Amount: $6,000,000

Quantifiable emission reductions: Estimated emissions reductions associated with this measure includes up to 2.4 tons of PM (including toxic diesel particulate matter), 114.9 tons of NOx, and 8.4 tons of VOCs.

MEASURE 1.B SCHOOL BUS REPLACEMENT

To provide increased outreach and access to incentive funding for the replacement of older, high polluting school buses with new zero-emission school buses servicing the Arvin/Lamont community.

Replacing older school buses is important to reduce children's exposure to diesel emissions including NOx and PM2.5 as these pollutants negatively impact human health, especially for sensitive populations such as children. New, zero-emission battery electric and near-zero emission natural gas powered school buses are significantly cleaner than older diesel buses.

Emissions from school buses are regulated by the California Air Resources Board Statewide Truck and Bus Regulation that requires transition to cleaner technology over time. Generally phased in by model year.
https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm

This measure would cover up to 100% of the cost of replacing up to 4 diesel school buses with electric buses at $400,000 each.

Implementing Agency: Valley Air District

Type of Measure: Incentives

Implementation: 2022-2026

Budgeted Amount: $1,600,000

Quantifiable emission reductions: Estimated lifetime emissions reductions associated with this measure includes up to 0.1 tons of PM, 7.2 tons of NOx, and 1.4 tons of VOCs.

AGRICULTURAL OPERATIONS IN ARVIN/LAMONT

The San Joaquin Valley's natural environment supports one of the most productive agricultural regions in the country; the Sierra Nevada provides the necessary water for growing the abundance of crops, and a temperate climate provides a long growing season. The community of Arvin/Lamont is set among dairies, orchards, and other farming operations. These activities generate emissions from the use of diesel-fired internal combustion engines used to power agricultural pumps for irrigation, open burning, trucks, tractors, dairy operations, dust from orchards, vineyards, and row crops, and other agricultural activities.

Agricultural source categories include fuel combustion, industrial processes, farming processes, and pesticides/fertilizers. Particulate matter (PM) emissions are caused by harvesting operations, tilling operations, livestock husbandry, and from fugitive dust. Emissions also include volatile organic compounds (VOCs) from animal husbandry, pesticides, and fertilizers; as well as oxides of nitrogen (NOx) and combustion PM from farm equipment.

In the Arvin/Lamont community, 32.5 tons per year (tpy) of NOx, 5.47 tpy of VOCs, and 1.88 tpy of PM2.5 are attributed to heavy-duty farm equipment emissions. Other farming operations, including harvesting, tilling, and husbandry, account for 14.9 tons per year of PM2.5.

COMMUNITY CONCERNS AND COMMENTS

Community members expressed concerns regarding the adverse health effects resulting from emissions generated at dairies and farming operations in the area. Priority areas of concern expressed by Steering Committee members during meeting discussions and feedback exercises include dairy operations, dust generated from orchards and land farming, and pesticide applications.

CURRENT CONTROL PROGRAMS

Current District rules regulating open burning, internal combustion engines, dairy operations, and dust from orchards, vineyards, and row crops are as follows:

- 4101 Visible Emissions
- 4103 Open Burning
- 4550 Conservation Management Practices
- 4570 Confined Animal Facilities
- 4702 Internal Combustion Engines

Additionally, a variety of incentive programs are available for alternatives to open burning, the replacement of agricultural tractors, trucks, pumps, and nut harvesters or sweepers, as further detailed below. Incentive funding is also available for dairy digesters and non-digester manure management practices.

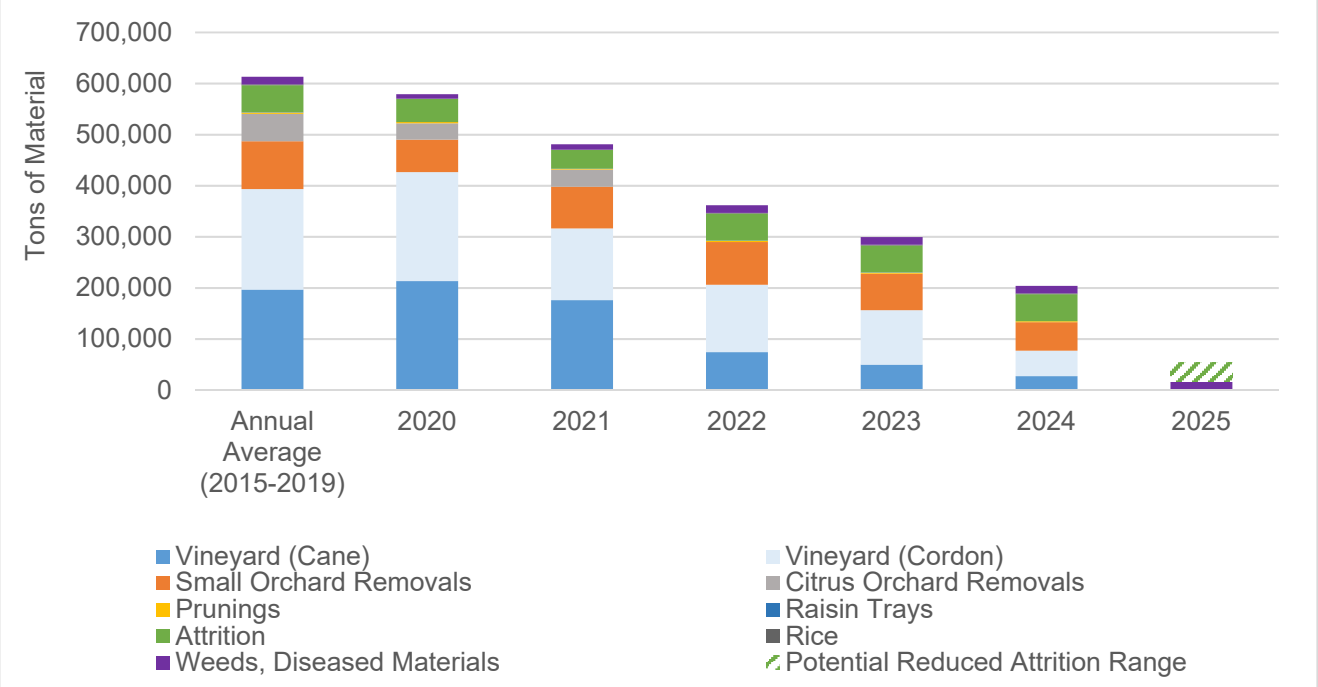
Open Burning

District Rule 4103 (Open Burning) was originally adopted on June 18, 1992, to regulate and coordinate the use of open burning while minimizing smoke impacts on the public. In 2003, California Senate Bill (SB) 705 (California Health and Safety Code (CH&SC)

Section (§) 41855.5 and 41855.6) established a schedule to phase out the open burning of agricultural material, but provided for a postponement of the phase-out where justified by technical and economic impediments. The District incorporated the phase-out requirements of SB 705 into Rule 4103. Rule 4103 also contains requirements for collecting, sorting, drying, and igniting agricultural materials; the timing, monitoring, and maintenance of burns; and specific requirements for field crop burning, ditch bank and levee maintenance, contraband materials, Russian thistle (tumbleweeds), and diseased materials. Additionally, the rule details a set of conditions that must be met for a burn permit to be issued.

On June 17, 2021, in accordance with recent recommendations from the California Air Resources Board (CARB)[1], the District Governing Board approved the *Supplemental Report and Recommendations on Agricultural Burning*, which established an updated schedule for the near-complete phase-out of remaining agricultural open burning in the Valley by January 1, 2025. CARB provided concurrence with the District's strategy on June 18, 2021[2], and on December 23, 2021, the U.S. Environmental Protection Agency (EPA) proposed to approve the District's updated phase-out schedule into the State Implementation Plan (SIP)[3].

Figure 4-4 Projected Annual Open Burn Tonnage



[1] CARB. San Joaquin Valley Agricultural Burning Assessment. February 2021. Retrieved from: https://ww2.arb.ca.gov/sites/default/files/2021-02/Staff_Recommendations_SJV_Ag_Burn.pdf
[2] CARB. June 18, 2021 Letter providing CARB Concurrence through December 31, 2024. Retrieved from: https://ww2.valleyair.org/media/5lan5hsx/jun-2021-sjv-ag-burn-concurrence-letter_final.pdf
[3] EPA. Air Plan Approval; California; San Joaquin Valley Unified Air Pollution Control District; Open Burning. 86 FR 72906. December 23, 2021. Retrieved from: https://www.govinfo.gov/content/pkg/FR-2021-12-23/pdf/2021-27797.pdf

Following the near-complete phase-out of open agricultural burning in 2025, the District will continue to allow burning of limited amounts of rice straw (which has the potential for risk of disease), diseased crops and materials, weeds affecting ponding and levee banks, attrition, and weeds and other maintenance, as defined by Rule 4103.

The District uses a comprehensive Smoke Management System (SMS) to manage the Valley's remaining open burning of agricultural crops and materials. On a daily basis, the District analyzes projected local meteorology, the air quality conditions, the atmospheric holding capacity, the amount of burning already approved in a given area, and the potential impacts on downwind populations. Through the results of this daily analysis, the District uses the SMS to manage 97 Valley burn zones and allocates daily burning allowances if appropriate. This approach ensures the District limits the distribution of air pollutant emissions from open burning temporally and spatially, providing flexibility of burn days for growers while minimizing the impact on the public.

Properly managed burning allocations under the SMS ensures that air quality impacts, health impacts, and public nuisance from open burning of agricultural materials are minimized to the fullest extent feasible.

Furthermore, the District's *Alternative to Open Ag Burning Incentive Program* provides incentives for chipping or shredding agricultural material, with the materials being required to be used for soil incorporation or land application on agricultural land. To date, a total of $48.3 million has been offered to fund these projects which has resulted in approximately 4,270 tons of NOx, 6,405 tons of VOC, and 7,813 tons of PM emission reductions.

Dust from Orchards, Vineyards, and Row Crops

The District requires that growers implement conservation management practices to reduce air pollution from agricultural operations. Growers must submit a conservation management plan to the District for approval, as required by District Rule 4550 - *Conservation Management Practices*. Within this plan, farmers detail specific measures they will be implementing to reduce dust emissions from their facility. District staff regularly conducts site inspections of Valley farms to ensure compliance with rule requirements.

The District has worked closely with representatives from the agricultural community to evaluate new harvesting equipment and practices that can effectively reduce dust from harvest activities. Based on the significant dust emission reductions that low-dust harvesting equipment can provide, the District is offering funding for the replacement of older, conventional nut harvesters or sweepers with new, low-dust technology equipment for use in nut harvesting operations. This incentive funding can also be packaged with the Ag Tractor Replacement Program funding to upgrade the tractor used to pull harvesting equipment.

Agricultural Tractors

The District's *Ag Tractor Replacement Program* provides incentive funds for the replacement of in-use, off-road mobile equipment that are engaged in agricultural

operations as defined by CARB. Funds are provided on a first-come, first-served basis. Eligible tractor/equipment includes but is not limited to wheel loaders, balers, combines, graders or tractors.

Agricultural Pump Replacement Program
This program provides incentives for engine replacement (repower) of engines/motors used to power agricultural irrigation pumps. The Agricultural Pump Incentive Program provides monetary incentives for the replacement of Tier 3 internal combustion engines (IC engines) to Tier 4f IC engines and Tier 3 IC engines to electric motors. Funds are provided on a first-come, first-served basis. District Rule 4702 – *Internal Combustion Engines* limits the emissions of NOx, CO, VOC, and SOx from IC engines.

Agricultural Trucks
Agricultural trucks are controlled by the California Air Resources Board Statewide Truck and Bus Regulation that requires transition to cleaner technology over time. This regulatory transition is generally phased in by model year.

Dairy Operations
Dairy Operations in the San Joaquin Valley are subject to District Rules 4570 – *Confined Animal Facilities*, Rule 4550 – *Conservation Management Practices* and Rule 4101 – *Visible Emissions.*

The purpose of Rule 4570 is to limit VOC emissions from Confined Animal Facilities (CAFs). This rule applies to facilities where animals are corralled, penned, or otherwise caused to remain in restricted areas and primarily fed by a means other than grazing for at least 45 days in any twelve-month period. In addition to limiting VOC emissions, Rule 4570 also includes measures that limit ammonia (NH3) emissions from these operations. The purpose of Rule 4550 is to limit fugitive dust emissions from agricultural operations. Dairy operations are subject to stringent enforcement provisions, including ongoing mitigation measures and annual inspections. Dairy operations must demonstrate continued compliance with additional visible emissions requirements as described in Rule 4101.

Dairy Digesters
California Department of Food Agriculture (CDFA) Dairy Digester Research and Development Program (DDRDP) provides financial assistance for the installation of dairy digesters in California. CDFA receives funding from California Climate Investments for methane emissions reductions from dairy and livestock operations. Current DDRDP projects are expected to reduce greenhouse gas emissions by an estimated 12.9 million metric tons of CO2e. These projects also reduce emissions of VOCs and ammonia.

Alternative Manure Management Program (AMMP)
California Department of Food and Agriculture (CDFA) Alternative Manure Management Program (AMMP) provides financial assistance for the implementation of non-digester manure management practices. Currently, eligible practices for funding through AMMP include: pasture-based based management; solid separation or conversion from flush to scrape in conjunction with some form of drying or composting of collected manure.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

The above control programs will continue to achieve emission reductions throughout the Valley, including in agricultural areas surrounding the community of Arvin/Lamont. Based on concerns and priorities expressed by the Steering Committee and other community members, the following strategies were developed to reduce emissions from agricultural operations in and around the community of Arvin/Lamont. These strategies are a combination of targeted outreach, new incentive programs, and partnerships with other agencies to reduce emissions and exposure to emissions in the AB 617-selected community.

MEASURE 1.C AG EQUIPMENT REPLACEMENT

Overview: This measure will provide increased outreach and access to incentive funding for the replacement of older, high polluting agricultural equipment (e.g. tractors) operating within and surrounding Arvin/Lamont with new, cleaner equipment through the District's existing Heavy-Duty Engine Incentive Program. Replacing older diesel agricultural equipment (tractors) is important to reduce the public's exposure to diesel emissions including NOx and PM2.5 as these pollutants negatively impact human health, especially for sensitive populations such as children. New agricultural equipment, outfitted with the cleanest available technology reduces emissions from NOx and PM2.5 by more than 90% over the existing technology.

The goal of this action is to replace up to 50 pieces of agricultural equipment operating in and around the community with new, cleanest available technology, utilizing existing Board approved program criteria, according to the Carl Moyer Program guidelines where applicable, and subject to additional requirements contained within the approved AB 617 Community Air Protection Guidelines. The proposed funding would cover up to 80% of the cost of replacing up to 50 pieces of agricultural equipment at an average incentive of $90,000 each.

Implementing Agency: Valley Air District

Type of Measure: Incentives

Implementation: 2022-2026

Budgeted Amount: $4,500,000

Quantifiable emission reductions: Estimated emissions reductions associated with this measure include 13 tons of PM2.5 consisting of diesel particulate matter and 186.5 tons of NOx.

MEASURE 1.D ALTERNATIVES TO AG BURNING

Overview: The goal of this strategy is to limit the potential for localized PM2.5 impacts associated with open agricultural burning by providing enhanced access to funding for the District's Alternatives to Agricultural Open Burning Incentive Program for growers within Arvin/Lamont community.

This strategy is consistent with Community Steering Committee recommendations to implement strategies focusing on reducing emissions from agricultural open burning. This strategy would provide enhanced access to $1,400,000 in dedicated funding, utilizing existing Board-approved criteria. This measure would cover up to $1,400 per acre for up to 1,000 acres of alternative practices and help achieve the ongoing emissions reductions associated with the phase-out of agricultural open burning.

Implementing Agency: Valley Air District

Type of Measure: Incentives

Implementation: 2022-2026

Budgeted Amount: $1,400,000

Quantifiable emission reductions: Estimated lifetime emissions reductions associated with this measure includes up 110 tons of PM, 58 tons of NOx, and 100 tons of VOCs.

4.2. INCENTIVES - RESIDENTIAL BENEFITS

LAWN AND GARDEN EQUIPMENT IN ARVIN LAMONT

Small off-road engines (SORE) which are typically utilized in gas powered lawn and garden equipment emit oil-based particulates, PM2.5, NOx, and a mixture of hydrocarbons, which combine with other gases to form ozone, carbon monoxide and other toxic air contaminants. This equipment can also cause a significant amount of fugitive dust and can increase fugitive emissions including PM, toxic air contaminants, and ultrafine particles resulting in negative health impacts for the user.

According to a 2003 study by the California Air Resources Board, there are over 11.4 million pieces of residential lawn and garden equipment operating throughout the state. In the Arvin Lamont Community the emissions from this sector total 1.8 tons per year (TPY) of NOx, 15.4 TPY of VOC and 0.17 TPY of PM2.5. These total emissions contribute 0.5 % of the NOx inventory, 1.1 % of the VOC inventory, and 0.2% of the PM2.5 inventory.

Figure 4-5 Electric Yard Equipment Reduces Emissions near Homes and Places of Business

COMMUNITY CONCERNS AND COMMENTS

Community Steering Committee comments regarding Lawn and Garden equipment included better outreach to inform community members of available incentives and increased incentives for the equipment as well as providing opportunities for residents to receive free electric lawn mowers. In addition, Community Steering Committee comments suggested prioritizing residential equipment replacements and ensuring that commercial equipment operated primarily within the boundaries of the AB617 community.

CURRENT CONTROL PROGRAMS

CARB has a SORE program, which includes lawn and garden equipment. In December 2021, CARB approved a measure that will require most newly manufactured SORE found in leaf blowers, lawn mowers and other equipment be zero emission starting in 2024.

https://ww2.arb.ca.gov/our-work/programs/small-off-road-engines-sore

In addition, the District offers incentives to help reduce emissions from gas-powered lawn and garden equipment. The Clean Green Yard Machines (CGYM) program provides funding for the following options:

- The residential CGYM provides rebates for the replacement of an old gas-powered mower with a new electric mower and for the purchase of eligible new electric lawn and garden electric equipment without replacements. To date, this program has replaced over 7,400 lawn mowers with over $1.5 million in funding. http://www.valleyair.org/grants/cgym.htm

- The Commercial CGYM launched in May 2019 and provides funding for the replacement of eligible old gas-powered lawn and garden equipment with battery-powered options for public agencies, private entities, and businesses. http://valleyair.org/grants/cgym-commercial.htm

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

In order to achieve additional emission reductions from the Lawn and Garden category the District will provide enhanced outreach and access to Arvin Lamont residents or businesses who would like to participate in our available incentive programs. For the residential program, the District proposes to cover the full cost of an electric lawn mower purchase when replacing an existing gas powered mower.

MEASURE 2.A RESIDENTIAL LAWN/GARDEN EQUIPMENT

Overview: The goal of this strategy is to reduce NOx and PM2.5 emissions from residential lawn and garden equipment by replacing existing gas powered units with battery powered zero emission models. The District's existing Residential Clean Green Yard Machines program focuses on this goal by offering incentive funding ranging from $100-250 for the replacement of existing gas powered units with battery powered zero emission models. Additionally, the District offers up to $50 for the purchase of a new eligible electric lawn care equipment without requiring an old piece of equipment to be turned in. Using existing District Board-approved criteria, this strategy will provide enhanced outreach and education as well as higher incentive funds to local Arvin/Lamont residents to encourage participation and maximize local emission reductions within the community. This strategy will increase outreach and access to incentive funding while providing rebates up to 100% of the equipment cost of a new electric lawn mower when replacing an existing gas powered model. The goal is to replace 350 gas powered units at an expected cost of $500 per unit.

Implementing Agency: Valley Air District

Measure Type: Incentives and Outreach

Budgeted Amount: $175,000

Emission Outcome: Reduction

Quantifiable Emission Reductions: Estimated emissions reductions associated with this measure includes up to 0.1 tons of PM2.5, 0.1 tons of NOx, and 2 tons of VOC.

MEASURE 2.B COMMERCIAL LAWN/GARDEN EQUIPMENT

Overview: The goal of this strategy is to reduce NOx and PM2.5 emissions from commercial landscaping operations, in the Arvin/Lamont AB 617 community, by replacing existing gas powered equipment with battery powered zero emission models. Emissions from commercial lawn care equipment directly affect equipment operators and community residents. The District currently offers a commercial lawn and garden equipment replacement program, which offers incentive funding ranging from $200-$15,000 for the replacement of gas powered lawn equipment with battery operated zero emission technology. In addition, the program provides incentive funds for up to two batteries and one charger to ensure that the equipment is capable of operating for a full day of work.

The District will focus on increased participation from small, locally owned businesses and schools in the Arvin/Lamont community to generate immediate emission reductions, which directly affect local residents on a frequent basis. This strategy will provide enhanced outreach and access to available incentive funds offered by the District, utilizing Board-approved criteria. The goal of this measure is to replace 6 pieces of commercial grade gas powered lawn and garden equipment at an expected cost of up to $25,000 per unit.

Emission reductions associated with this measure will be calculated with CARB-approved methodology.

Implementing Agency: Valley Air District

Measure Type: Incentive and Outreach

Budgeted Amount: $150,000

Quantifiable Emissions Reductions: Estimated emissions reductions associated with this measure will be calculated based on a methodology currently being developed by CARB.

OLDER/HIGH POLLUTING PASSENGER CARS IN ARVIN LAMONT COMMUNITY

Mobile source emissions account for over 85% of the overall NOx inventory in the San Joaquin Valley. With no regulatory authority over these sources, the District has relied on voluntary incentive programs to transition older, higher emitting vehicles to newer, cleaner and more fuel efficient models. With limited public transportation options available to residents driving is more prevalent in the Valley than in other areas of the state. Vehicles registered in the Valley are typically older and have higher mileage than statewide averages.

Emissions from light duty vehicles in Arvin Lamont total 19.43 tons per year (tpy) of NOx, 27.49 tpy of VOC, and 2.84 tpy PM2.5. These total emissions contribute 5.2% of the NOx inventory, 2.0% of the VOC inventory, and 3.5% of the PM2.5 inventory.

Figure 4-6 The District's Drive Clean in the San Joaquin Repair and Replacement Program

COMMUNITY CONCERNS AND COMMENTS

Community Steering Committee comments regarding passenger vehicles included increased outreach and incentives for low income residents, increasing charging infrastructure in the community, and questions about the effectiveness of existing programs for low-income individuals. As detailed below, to address these concerns District staff have developed new programs, specifically for Arvin/Lamont community members, to provide incentive funding for clean-air vehicles, to bring enhanced opportunities for incentives for vehicle repair for low-income residents, to bring car share programs to the community, and create a new incentives program for Ebikes for community residents.

CURRENT CONTROL PROGRAMS

The District does not have regulatory authority of emissions from mobiles sources, however, due to the large amount of pollution that originates from passenger vehicles the District has implemented a suite of programs to reduce pollution from mobile sources. These programs include the following measures:

- Tune In Tune Up vehicle repair program which provides incentive funds to repair high emitting vehicles.

http://valleyair.org/drivecleaninthesanjoaquin/repair/

- Vehicle replacement program which provides funding to replace older, high emitting vehicles with newer, cleaner and more fuel efficient models. https://www.valleyair.org/drivecleaninthesanjoaquin/replace/

- The vehicle rebate program provides rebates for the purchase or lease of a new clean air vehicle including battery electric, fuel cell, plug in hybrid, zero emission motorcycles, and advanced technology natural gas vehicles. https://www.valleyair.org/drivecleaninthesanjoaquin/rebate/

- Incentives are available for publically accessible charging infrastructure through the District's Charge Up! Program http://valleyair.org/grants/chargeup.htm

- The District's Healthy Air Living school program promotes no idling while picking up children at school and provides no idling signs to schools to encourage drivers to turn off their engines.

- District Indirect Source Rule (9510) accounts for mobile source emissions from construction and new development projects and ensures that emissions from these activities are mitigated.

- District Employer based Trip Reduction Rule (9410) requires large employers to implement measures to encourage employees to take alternative transportation to work in order to reduce single occupancy vehicle trips.

- CARB mobile source strategy calls for increasing the deployment of plug in hybrid, battery electric, and fuel cell vehicles in order to attain federal ozone standards, reducing greenhouse gas emissions, minimizing health risks, reducing petroleum usage and increasing energy efficiency.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Due to the high priority that community members placed on reducing criteria pollutant and toxic air contaminant emissions that originate from passenger vehicles operating in and around the community, District staff and the Steering Committee have developed targeted strategies for implementation in the Arvin Lamont community. As further detailed below, measures developed include additional incentive funding intended to increase the deployment of electric vehicles through the replacement of gas powered vehicles currently in use; launching an electric vehicle car sharing program; providing additional charging infrastructure throughout the community; providing for electric vehicle maintenance training to increase available repair facilities and job skills; and repairing high polluting passenger vehicles.

The following are proposed measures that are within the Air District's statutory jurisdiction to implement:

MEASURE 2.C INCENTIVES FOR PASSENGER VEHICLE REPAIR

Overview: The goal of this strategy is to reduce emissions of high emitting passenger vehicles that may be in need of repair by providing funding for up to five (5) "Drive Clean in the San Joaquin" Repair Program events within the Arvin/Lamont AB 617 community. Under this program, financial incentives up to $800 will be available for emissions related testing and repairs for eligible high emitting vehicles. Through the program, weekend testing events (if local pandemic/health protocols allow), will be held to determine if vehicles are in need of emissions related repairs. Approved participants are provided vouchers which can be utilized for the necessary smog tests, diagnostic work and emissions related repairs at participating STAR certified smog shops. Reducing emissions from passenger vehicles is important due to their contribution to the formation of ozone in the Valley.

Implementing Agency: Valley Air District

Type of Measure: Incentives

Budgeted Amount: $360,000

Quantifiable Emission Reductions: Estimated emissions reductions associated with this measure includes up to 4.1 tons of NOx.

MEASURE 2.D INCENTIVES FOR PASSENGER VEHICLE REPLACEMENT WITH ELECTRIC OR HYBRID VEHICLES

Overview: The goal of this strategy is to reduce emissions associated with passenger vehicles by replacing 200 vehicles with newer, more fuel-efficient models, and providing additional incentives for Level 2 residential chargers in the Arvin/Lamont community. Emission reductions from passenger vehicles provide benefits to area residents as well as assist in reducing ozone formation in the Valley. Enhanced outreach would be conducted in the Arvin/Lamont community to ensure that residents are fully aware of available incentive options and community residents would be provided priority access through the program in order to complete projects as quickly as possible. Through the District's existing Board approved "Drive Clean in the San Joaquin" replacement program, incentives are currently offered for low to moderate income residents of disadvantaged communities to replace their older, high polluting vehicle with a newer, cleaner model. The program currently offers up to $9,500 towards the purchase on an eligible replacement vehicle, with an additional $2,000 provided to participating residents who purchase or lease a plug-in hybrid electric or a battery-electric vehicle and want to install a Level 2 charger in their home. This program would provide enhanced incentives, up to $16,000 in total per vehicle, for up to 200 vehicles.

Implementing Agency: Valley Air District

Type of Measure: Incentives and Outreach

Budgeted Amount: $3,200,000

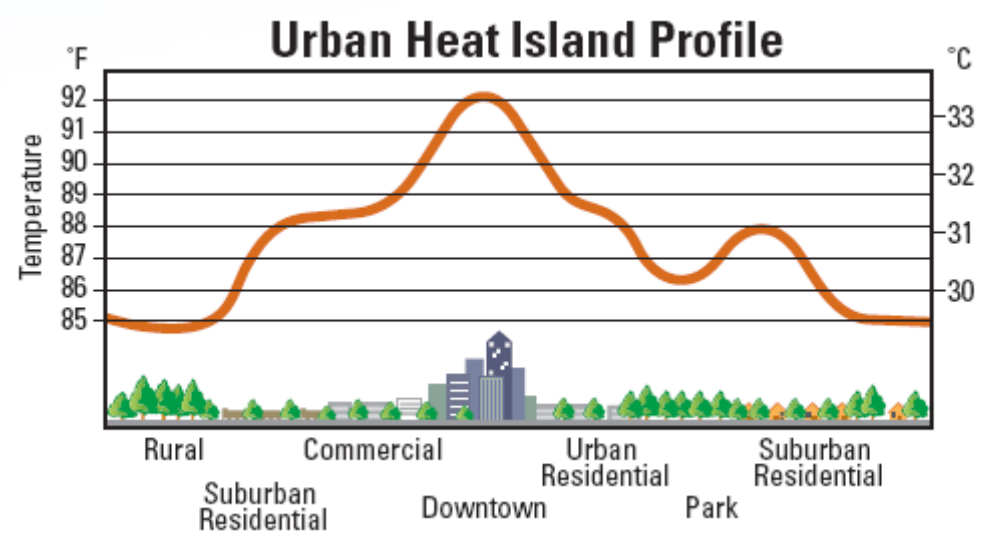
Quantifiable Emission Reductions: Estimated emissions reductions associated with this measure includes up to 1.9 tons of NOx and 0.1 tons of PM2.5.

4.3. INCENTIVES - COMMUNITY SERVICES

URBAN GREENING

Urban greening is one way to help improve air quality and public health in addition to enhancing the overall beautification of the community with drought resistant low maintenance greenery. Trees and vegetation help reduce the impacts of heat islands by increasing the amount of shade and cooling the air by evapotranspiration. [4] Careful placement and choice of vegetation will maximize its cooling benefits. Shade provided by trees and other vegetation prevents sunlight from reaching heat-absorbing surfaces such as sidewalks and parking lots, cooling the area by 2 to 9 degrees Fahrenheit. Air quality also benefits from a decrease in energy usage. The less energy used, the fewer power plants running and emitting ozone precursors.[5] The total net savings when considering energy, ozone, and PM reduced from vegetation were valued at $210/tree.

Figure 4-7 Urban Heat Island Effect Illustrated (Source: EPA, 1992)



COMMUNITY CONCERNS AND COMMENTS

The steering committees expressed an interest in opportunities for increased urban greening and forestry in the communities of Arvin and Lamont, as a strategy to reduce exposure from emissions that occur along local transportation corridors near sensitive receptors, while keeping in mind water and maintenance issues.

CURRENT PROGRAMS

The District Fast Track Action Plan identified Heat Island Mitigation as a measure to be implemented with the goal to increase urban forest canopy shading and increase the albedo of structures and pavement. This guidance includes a model resolution and

[4] EPA (1994) *Using Trees and Vegetation to Reduce Heat Islands.* Retrieved 1/21/21 from https://www.epa.gov/heatislands/using-trees-and-vegetation-reduce-heat-islands

[5] EPA (2008) *Heat Island Compendium.* Retrieved 1/21/21 from https://www.epa.gov/heatislands/heat- island-compendium

policy statement for use by businesses, government, and organizations who desire to commit to heat island mitigation strategies.

Due to the benefits of urban greening, there are several programs available to support urban greening in communities. Below are the ongoing efforts to promote Urban Greening by other agencies, as well as programs committed to be implemented in future State and/or Valley-wide programs.

- **California ReLeaf Grants:** California ReLeaf seeks and provides pass-through grants to ReLeaf Network Members and other community groups interested in planting and caring for trees in California and offers grant programs through the Social Equity Grant Program and California Arbor Week Grant.
- **California Natural Resources Agency Urban Greening Grant Program:** Consistent with AB 32, the Urban Greening Program will fund projects that reduce greenhouse gases**.** This program includes urban heat island mitigation projects and energy conservation efforts related to shade tree projects.
- **Cal Fire:** Through the California Climate Investments (CCI) Urban & Community Forestry Grant Program, CALFIRE works to optimize the benefits of trees and related vegetation through multiple-objective projects as specified in the California Urban Forestry Act of 1978.
- **Active Transportation Program (ATP): California Department of Transportation (CALTRANS):** Urban forestry, such as trees and other vegetation, are significant components of several eligible projects under the ATP, including parks, trails, and safe-routes-to-schools.
- **California Urban Forests Council (CAUFC):** As a coalition, CAUFC is dedicated to the expansion and perpetuation of sustainable urban and community forests to enhance the quality of life for all Californians.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Due to the community's interest in increased urban greening, the District will be working with other agency partners to bring increased funding for urban greening to the AB 617 selected communities, as further described in the following measure.

MEASURE 3.A URBAN GREENING

Overview: The purpose of this strategy is to identify and support efforts to increase urban greening to improve air quality for residents in the Arvin and Lamont communities. This measure is supported by scientific studies that have shown urban trees can help with the removal of air pollutants and reduced emissions of volatile organic compounds (VOC's). The effects of urban trees on fine particulate matter (PM2.5) was modeled for ten U.S. cities, with total annual PM2.5 removal varying from 5.2 tons in Syracuse to 71.1 tons in Atlanta. Overall air quality improvements attributed to urban trees ranged between 0.05% in San Francisco to 0.24% in Atlanta (Nowak, Hirabayashi, Bodine, Hoehn, 2013). Based on a study to assess the effects of urban trees on air quality have found that urban vegetation can attribute to temperature reduction, removal of air pollutants, reduced emission of VOCs, and building energy conservation (United States Department of Agriculture Forest Service, 2002). The measure would also include an ongoing maintenance program with the landowner or land use agency where the trees are planted.

The District has long been supportive of the public benefits provided from planting of trees and vegetation. The District's Fast Track Action Plan, adopted by the Governing Board to reduce ozone pollution in the Valley, identified strategic use of tree and vegetation planting as a potential measure to reduce ozone. There has also been significant efforts at the federal, state, and local levels to promote and increase urban greening through funding opportunities, programs, and projects.

It should be noted that, while the District has no direct authority over how agencies allow land, under their jurisdiction, to be used. These land-use decisions on whether to allow or require urban greening in specific locations, are the responsibility, under state law, of cities and counties, school Districts, private landowners, or state & federal agencies responsible for transportation corridors, state and federal parks, and other properties. While AB 617 does not provide the District with new land-use regulatory authority, so land-use authority continues to remain with cities, counties, and state and federal land-use agencies, as discussed in CARB's Blueprint (see "Who Has the Authority to Implement Actions?", page 26 of the Blueprint), the District is committed to working with these agencies and the CSC to see this measure implemented this measure.

Implementing Agency: Valley Air District, City of Arvin, Kern County, and other local partners as identified by the CSC

Type of Measure: Partnership, Incentives

Budgeted Amount: $500,000

Quantifiable emission reduction: Utilize CARB-established methodology available through the Urban & Community Forestry Program

VEGETATIVE BARRIERS

Vegetative barriers, also known as windbreaks, are comprised of one or more rows of trees or shrubs that may be planted in specific areas of concern in order to improve air quality in the immediate area by intercepting airborne particles, dust, chemicals, and odors. Pollutants directly emitted from cars, trucks, and other motor vehicles are found in higher concentrations near major roads. In addition, stationary sources such as industrial facilities, factories, and other industrial processes can also contribute air pollutants to their surrounding areas. While various emission control techniques and programs exist to reduce these pollutants from mobile and stationary sources, vegetative barriers have been shown to be an additional measure to potentially reduce a population's exposure to air pollution through the interception of airborne particles and the uptake of gaseous pollutants. Examples of vegetative barriers include trees, bushes, shrubs, or a mix of these. Generally, a higher and thicker vegetative barrier with full coverage will result in greater reductions in downwind pollutant concentrations. In addition to air quality benefits, vegetative barriers can improve aesthetics, increase property values, reduce heat, control surface water runoff, and reduce noise pollution.[6]

Characteristics of a vegetative barrier that should be considered include the porosity/density of the vegetative barrier, the characteristics of the vegetation during different seasons, leaf surface characteristics, vegetation air emissions (e.g. biogenic VOCs), and the resistance of the vegetative barrier to air pollution. Other considerations include: soil characteristics, availability of water, control of water runoff, maintenance of the vegetative barrier, use of native and non-invasive species, and roadway safety. Vegetative barriers may also be used with solid barriers to increase mitigation. Research is ongoing as to the effectiveness of vegetative barriers in reducing exposure to pollutants, but a recent study has found that vegetative barrier installations may reduce downwind exposure to carbon monoxide and fine particulate matter by at least 23%.[7]

The US EPA has produced a fact sheet with further information on vegetative barriers, available here: https://19january2017snapshot.epa.gov/sites/production/files/2016-08/documents/recommendations_for_constructing_roadside_vegetation_barriers_to_improve_near-road_air_quality.pdf

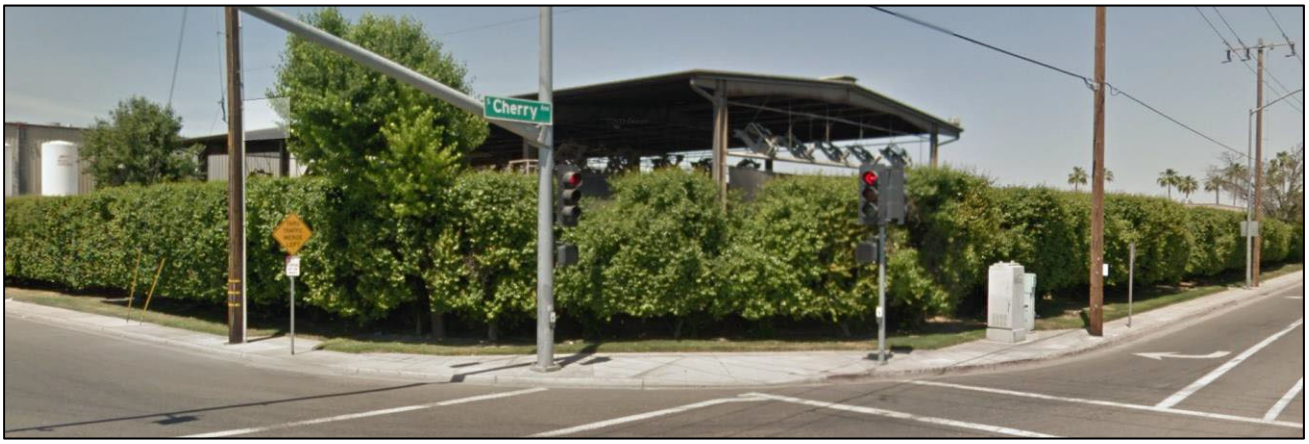
[6] Baldauf, R. (2016). Recommendations for Constructing Roadside Vegetation Barriers to Improve Near-Road Air Quality. National Risk Management Laboratory Office of Research and Development, Air Pollution Prevention and Control Division: Washington, DC, USA.

[7] Lin, M. Y., Hagler, G., Baldauf, R., Isakov, V., Lin, H. Y., & Khlystov, A. (2016). The effects of vegetation barriers on near-road ultrafine particle number and carbon

Figure 4-8 Vegetative Barrier w/ Solid Barrier on Highway 198, Visalia, CA

Latest Google Map Information

Figure 4-9 Vegetative Barrier around Foster Farms, Fresno, CA



Latest Google Map Information

COMMUNITY CONCERNS AND COMMENTS

The Arvin/Lamont Steering Committee has identified Vegetative Barriers as a priority for air pollutant mitigation. The committee has expressed the need for the installation of vegetative barriers around sources of concern and sensitive receptors, such as schools or along major truck traffic corridors.

CURRENT PROGRAMS

The Valley Air District, the City of Arvin, Kern County, the California Department of Transportation (Caltrans), and other local partners have promoted the use of vegetative barriers for reducing exposure to air pollutants, mitigating the urban heat island effect, and improving aesthetics.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Based on community interest in vegetative barriers, the following measure was developed for implementation as a part of the Arvin/Lamont CERP.

MEASURE 3.B INSTALLATION OF VEGETATIVE BARRIERS AROUND SOURCES OF COMMUNITY CONCERN

Overview: The purpose of this strategy is to provide incentives for the installation and maintenance of vegetative barriers around sources of concern to reduce particulate matter, odor, and other emissions, as feasible. Based on community interest in vegetative barriers, the District will also look to partner with other agencies to identify additional grant funding to support the installation of vegetative barriers at/near industrial facilities, schools, and along major transportation corridors.

It should be noted that the SJVAPCD has no authority over how agencies allow land under their jurisdiction to be used. These land-use decisions, such as whether to allow or require vegetative barriers in specific locations, are historically the responsibility, under state law, of cities and counties, or, in some cases, state and federal agencies responsible for transportation corridors, state and federal parks, and other properties. AB 617 does not provide the District with new land-use regulatory authority, so land-use authority remains with cities, counties, and state and federal land-use agencies, as discussed in CARB's Blueprint (see "Who Has the Authority to Implement Actions?", page 26 of the Blueprint), the District is committed to working with these agencies and the CSC to see this measure implemented.

Implementing Agency: Valley Air District, City of Arvin, Kern County, other local partners as identified by the CSC

Type of Measure: Partnership, Incentives

Implementation: 2022-2025

Budgeted Amount: $500,000

Quantifiable emission reduction: Estimated 5-year emissions reductions associated with this measure includes up to *0.3 tons combined of PM2.5 and NO2 per year.*

MEASURE 3.C FUNDING FOR ROAD IMPROVEMENTS, SIDEWALK INSTALLATION, AND BIKE PATHS

Overview: The purpose of this measure is to assess current roads, sidewalks and bike path infrastructure needs; to support community identified priority projects; and to seek out additional funding opportunities to make the community more bike and walk friendly.

Reducing emissions from motor vehicles through the implementation of alternate modes of transportation, including walking and bicycling, is important to reduce the public's exposure to vehicle emissions including NOx and PM2.5. This strategy would provide incentive funding for the development and construction of road and sidewalk improvements as well as Class 1, Class 2, and Class 3 bicycle paths, lane striping, and routes. The proposed funding level of this measure would be beyond the established District guidelines from the District's REMOVE and Public Benefit Grants Programs. Additionally, the District will work with transportation agencies in the Arvin/Lamont area, and seek to assist these agencies to identify project priorities and leverage existing funds, in addition to AB 617 funding, to maximize the number of projects that can be completed.

Implementing Agencies: Valley Air District, City of Arvin/Lamont, Kern County, and Kern Council of Governments

Type of Measure: Incentives

Budgeted Amount: $12,000,000

Quantifiable Emission Reductions: Estimated lifetime emissions reductions associated with this measure includes up to 10.2 tons of PM, 18.6 tons of NOx, and 37.8 tons of VOC.

MEASURE 3.D PUBLIC FLEET VEHICLES

Overview: To provide increased outreach and access to incentive funding for the replacement of older, higher polluting public fleet vehicles operating within the Arvin/Lamont community with new clean vehicle technology.

Replacing older public fleet vehicles is important to reduce the public's exposure to vehicle emissions including NOx and PM2.5. These pollutants negatively affect human health, especially for sensitive populations such as children. These are new clean vehicle technologies, including plug-in hybrid, battery electric and natural gas that are significantly cleaner than conventionally-powered gasoline and diesel vehicles.

State and Federal requirements control emissions from passenger vehicles. The Valley Air District does not have jurisdiction over these sources. However, due to the large amount of air pollution that originates from passenger vehicles in the Valley, including public fleet vehicles, the District has implemented a suite of programs to reduce pollution from public fleets:

- The Public Benefit Grants Program - http://valleyair.org/grants/publicbenefit.htm. The District operates this program. The purpose of this program is to fund the purchase of new electric, plug-in hybrid, or alternative fuel vehicles for public agencies to promote clean air alternative-fuel technologies and the use of low-or zero-emission vehicles in public fleets. This program is currently open and accepting applications on a first-come-first-served basis.

- Employer Based Trip Reduction (District Rule 9410) requires large employers to implement measures to encourage employees to take alternative transportation to work through the establishment of an Employer Trip Reduction Implementation Plan (eTRIP).
    - An eTRIP is a set of measures that encourages employees to use alternative transportation and ridesharing for their morning and evening commutes.
    - Each measure contributes to a workplace where it is easier for employees to choose to use ridesharing or alternative transportation.
    - Through this rule, single-occupancy vehicle trips are reduced, thus reducing emissions of oxides of nitrogen (NOx), volatile organic compounds (VOC) and particulate matter (PM).

The goal of this action is to work closely with public agencies, including City of Arvin and Kern County, to expedite the replacement of up to 20 vehicles through the District's Public Benefit Grants Program. This includes increased outreach to public agencies operating vehicles within the community as well as prioritized funding for

projects in the community.

Implementing Agencies: Valley Air District, City of Arvin/Lamont, Kern County, and Kern Council of Governments

Type of Measure: Incentives

Budgeted Amount: $400,000

Quantifiable Reductions: Estimated lifetime emissions reductions associated with this measure includes up to 0.1 tons of PM

MEASURE 3.E PARTNERSHIP TO CONNECT RESIDENTS TO INCENTIVES FOR EBIKES

Overview: The goal of this strategy is to encourage adoption for low-income individuals of electric bicycles (e-bikes) as a replacement for motor vehicle trips. The strategy would increase access to clean transportation options while reducing vehicles miles traveled by incentivizing e-bikes for the Arvin/Lamont community. Emission reductions from the utilization clean transportation provides benefits to area residents as well as assist in reducing impact from pollution in the Arvin/Lamont community.

Through the California Air Resources Board new e-bike voucher program, launching in July 2022, qualified residents would be eligible for an incentive to purchase an e-bike. The strategy will increase outreach and access to the statewide incentive funding towards the purchase on an eligible e-bike for low-income residents. The District will work with CARB and community residents to bring awareness about the e-bike program to the community.

Implementing Agency: California Air Resources Board and Valley Air District

Type of Measure: Outreach

Quantifiable Emission Reductions: Estimated emissions reductions associated with this measure will be calculated with CARB-approved methodology.

4.4. REGULATIONS AND ENFORCEMENT

Due to the nonattainment status of the Valley Air Basin for the criteria pollutants of fine particulate matter and ozone, the District requires that permitted facilities implement the most stringent control measures feasible for implementation to control criteria pollutants and associated precursor emissions. Beyond the regulations and stringent permitting requirements that are already implemented Valley-wide, the following sections detail enhanced regulatory strategies that will be implemented in the AB 617-selected community.

STATIONARY SOURCES IN ARVIN/LAMONT

A variety of stationary sources located in and around the Arvin/Lamont Community contribute to the overall emissions profile of the community. These sources range from smaller operations like gasoline dispensing operations (GDOs) and auto body coating operations, to larger operations like agricultural and oil and gas operations.

Oil and gas operations include equipment like internal combustion (IC) engines, boilers/steam generators, flares, and many others. Criteria pollutant emissions from this source category include NOx, SOx, PM10/PM2.5, CO, and VOC, and toxic air contaminants (TACs) like benzene, toluene, xylene, and hydrogen sulfide.

Within the Arvin/Lamont community, stationary sources contribute 55.06 tons per year (tpy) of NOx, 46.46 tpy of VOCs, and 4.77 tpy of PM2.5, which represents about 15%, 30%, and 9% of the total community inventory, respectively.

COMMUNITY CONCERNS AND COMMENTS

During committee discussions regarding stationary sources, committee members identified oil and gas production, agricultural operations, and waste disposal as some of the sources to address. Members shared suggestions such as vegetative barriers at schools, highways, and agricultural fields, as well as providing incentives for resident vehicle repair, enhanced enforcement of dust regulations, replacement of diesel trucks and old tractors, and educational resources available for the community on District incentive programs and air quality information, among others.

CURRENT CONTROL PROGRAMS

For more than 25 years, the District has implemented several generations of emissions control regulations for stationary and area sources under its regulatory jurisdiction. These control measures represent the nation's toughest air pollution regulations and have greatly contributed to reducing ozone and particulate matter concentrations in the Valley. Stringent and innovative rules, such as those for indirect source review, residential wood burning, and agricultural burning, have set benchmarks for California and the nation. While there has been significant progress in reducing air pollution with these regulations, which have been greatly aided by the pollution reduction efforts and financial investments of Valley businesses and residents, the District continues to adopt and modify rules to achieve ongoing

emissions reductions and advance our progress toward clean air.

Gasoline Dispensing Operations (GDOs):
Gasoline dispensing operations in the San Joaquin Valley are primarily subject to District Rule 4621 - *Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants* and District Rule 4622 – *Gasoline Transfer into Motor Vehicle Fuel Tanks.*

The purpose of Rule 4621 is to limit VOC emissions from stationary storage containers, delivery vessels, and bulk plants. This rule applies to gasoline storage containers with capacities greater than 250 gallons and has requirements to install CARB certified Phase I vapor control systems. The purpose of Rule 4622 is to limit emissions of gasoline vapors from the transfer of gasoline into motor vehicle fuel tanks. This rule applies to any gasoline storage and dispensing operation or mobile fueler from which gasoline is transferred into motor vehicle fuel tanks. This rule also requires the installation of CARB certified Phase II vapor control systems. GDOs are subject to stringent enforcement provisions, including ongoing monitoring of equipment and annual inspections.

Auto Body Coating Operations:
Auto body coating operations in the San Joaquin Valley are primarily subject to District Rule 4612 – *Motor Vehicle and Mobile Equipment Coating Operations* and District Rule 4101 – *Visible Emissions.*

The purpose of Rule 4612 is to limit VOC emissions from coatings of motor vehicles, mobile equipment, and associated parts and components, and associated organic solvent cleaning, storage, and disposal. This rule applies to any person who supplies, sells, offers for sale, manufacturers, or distributes any automotive coating for use within the District, as well as any person who uses, applies, or solicits the use or application of any automotive coating within the District. This rule requires the sale and use of low VOC coatings and solvents, in addition to stringent requirements for the application of these coatings. Auto body coating operations are subject to stringent enforcement provisions, including ongoing recordkeeping of coatings/solvents used and annual inspections. Auto body coating operations must demonstrate continued compliance with additional visible emissions requirements as described in Rule 4101.

Oil and Gas Operations:
Oil and gas operations in the San Joaquin Valley are primarily subject to the following District rules:

- Rule 2260 – Registration Requirements for Equipment Subject to California's Oil and Gas Regulation
- Rule 4311 – *Flares*
- Rule 4401 – *Steam-Enhanced Crude Oil Production Wells*
- Rule 4402 – *Crude Oil Production Sumps*
- Rule 4404 – *Heavy Oil Test Station - Kern County*

- Rule 4407 – *In-Situ Combustion Well Vents*
- Rule 4408 – *Glycol Dehydration Systems*
- Rule 4409 – Components at Light Crude Oil Production Facilities, Natural Gas Processing Facilities, and Natural Gas Processing Facilities
- Rule 4453 – *Refinery Vacuum Producing Devices or Systems*
- Rule 4454 – *Refinery Process Unit Turnaround*
- Rule 4455 – Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants
- Rule 4460 – *Petroleum Refinery Fence-Line Air Monitoring*
- Rule 4623 – *Storage of Organic Liquids*
- Rule 4624 – *Transfer of Organic Liquid*

Depending on the equipment used by the oil and gas operation, units like boilers, steam generators or IC engines would be subject to:

- Rules 4306 and 4320 – *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*
- Rule 4702 – *Internal Combustion Engines*

The purpose of **Rule 2260** is to provide a registration process that satisfies the requirements of California's Oil and Gas Regulation, which limits methane emissions and leaks from equipment used in the oil and gas industry.

The purpose of **Rule 4311** is to establish flaring requirements and reduce VOC, NOx, and SOx emissions from operations involving the use of flares.

The purpose of **Rule 4401** is to limit VOC emissions from steam-enhanced crude oil production wells and related piping.

The purpose of **Rule 4402** is to limit VOC emissions from sumps used to store crude oil and produced water in crude oil production operations.

The purpose of **Rule 4404** is to limit VOC emissions from the operation of heavy oil test stations, i.e. a tank setting used to measure and collect crude oil from individual wells.

The purpose of **Rule 4407** is to limit VOC emissions from in-situ combustion wells and related piping. This process is largely no longer in use by oil production companies in the District.

The purpose of **Rule 4408** is to limit VOC emissions from glycol dehydration systems, a process in which water vapor is removed from produced gas streams.

The purpose of **Rule 4409** is to limit VOC emissions from leaking components at light crude oil production facilities, natural gas production facilities, and natural gas processing facilities.

The purpose of **Rule 4453** is to limit VOC emissions from refinery vacuum producing devices or systems by requiring that gasses from these systems be collected and controlled.

The purpose of **Rule 4454** is to limit VOC emissions resulting from the purging, repair, cleaning, or otherwise opening or releasing pressure from a refinery vessel during a process unit turnaround, i.e. taking equipment out of service for maintenance.

The purpose of **Rule 4455** is to limit VOC emissions from leaking components at petroleum refineries, gas liquids process facilities, and chemical plants.

The purpose of **Rule 4460** is to require real-time fence-line air monitor systems at or near property boundaries of petroleum refineries, which will provide air quality information to the public regarding concentrations of various air pollutants.

The purpose of **Rule 4623** is to limit VOC emissions the storage of organic liquids, including crude oil.

The purpose of Rule **4624** is to limit VOC emissions from the transfer of organic liquids. Oil and gas facilities are subject to stringent enforcement provisions, including inspection and maintenance (I&M) programs, periodic source testing requirements, and annual inspections. These operations are also subject to stringent emission control and leak detection and repair requirements.

The purpose of **Rules 4306 and 4320** is to limit emissions of NOx, CO, oxides of sulfur (SO2), and PM10 from boilers, steam generators, and process heaters. These rules apply to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour. These rules have very stringent emission limits, periodic monitoring, and source testing requirements.

The purpose of **Rule 4702** is to limit the emissions of NOx, CO, VOC, and SOx from internal combustion engines. This rule applies to any internal combustion engine rated at 25 brake horsepower or greater. This rule has very stringent emission limits, periodic monitoring, and source testing requirements.

Waste Disposal– Landfill and Composting Operations:
Waste disposal operations in the San Joaquin Valley are primarily subject to the following District rules:

- Rule 4311 – *Flares*
- Rule 4565 – *Biosolids, Animal Manure, and Poultry Litter Operations*
- Rule 4566 – *Organic Material Composting Operations*
- Rule 4642 – *Solid Waste Disposal Sites*
- Rules 8011 through 8071 – *Fugitive PM10 Emissions*

The purpose of **Rule 4311** is to establish flaring requirements and reduce VOC, NOx, and SOx emissions from operations involving the use of flares.

The purpose of **Rule 4565** is to limit emissions of VOCs from operations involving management of biosolids, animal manure, or poultry litter.

The purpose of **Rule 4566** is to limit VOC emissions from composting operations.

The purpose of **Rule 4642** is to reduce VOC emissions from solid waste disposal sites, which have a gas collection system and/or control device in operation, or undergoing maintenance or repair.

The purpose of **Rules 8011 through 8071** is to reduce fugitive dust emissions from outdoor sources such as agricultural operations, construction sites, bulk material handling and/or transporting operations, or other earth moving activities.

Agricultural Operations:
Agricultural operations in the San Joaquin Valley are primarily subject to the following District rules:

- Rule 4102 – *Nuisance*
- Rule 4550 – *Conservation Management Practices*
- Rule 4570 – *Confined Animal Facilities*
- Rules 8011 through 8071 – *Fugitive PM10 Emissions*

Depending on the equipment used by the agricultural operation, units like boilers, steam generators or IC engines would be subject to the following rules as described previously:

- Rules 4306 and 4320 – *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*
- Rule 4702 – *Internal Combustion Engines*

The purpose of **Rule 4102** is to protect the health and safety of the public prohibiting a person to discharge quantities of air contaminants or other materials which could cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public, or businesses and property.

The purpose of **Rule 4550** is to limit fugitive dust emissions from agricultural operation sites, by implementing a list of selected activities related to land preparation, harvesting, handling and raising of animals, and the use of agricultural unpaved roads, and unpaved vehicle/equipment traffic areas, among others.

The purpose of **Rule 4570** is to limit emissions of VOC from confined animal facilities, where animals are corralled, penned, or otherwise caused to remain in restricted areas for commercial purposes.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Due to the priority that community members placed on reducing PM2.5 and toxic air contaminant emissions that originate from stationary sources in and around the community, the following strategies have been developed for implementation in the Arvin/Lamont community.

MEASURE 4.A ENHANCED INSPECTION FREQUENCY

Overview: The goal of this strategy is to limit the potential for localized air quality impacts at permitted facilities that have had emissions violations in the last three years.

The District conducts inspections and investigations of permitted sources to determine compliance with a multitude of health-protective local, state, and federal air quality regulations that target both criteria and toxic pollutants. The District closely monitors these sources and strictly enforces applicable requirements. Compliance inspections are unannounced whenever possible and involve both a physical inspection of the facility and a review of their records. When a violation of a District permit, rule, or regulation is identified, the District takes appropriate enforcement action.

The District reviewed the enforcement history over a three-year period (October 2018-October 2021) for the permitted facilities in the Arvin-Lamont community, and determined that 72 enforcement actions were issued to facilities (not including gas stations) for violations resulting in excess emissions. These violations occurred at 9 permitted facilities in the Arvin/Lamont area. The District also issued 20 enforcement actions at 12 gas stations in the Arvin-Lamont community for violations resulting in excess emissions. The District believes that more frequent inspections for 20 of these 21 facilities, when feasible, would help to limit the potential for air quality impacts associated with emissions violations.

The District will increase the frequency of inspection at these facilities within the Arvin/Lamont community that has had an emission-based violation over the past three (3) years. These facilities will be inspected at least twice per calendar year for the next five (5) years or until the facility has four (4) consecutive inspections without an emissions violation, whichever occurs first.

Implementing Agency: Valley Air District

Type of Measure: Enforcement

Quantifiable Emission Reductions: Reduction in excess PM2.5, PM10, NOx, SOx, VOC, and CO emissions through higher compliance rates

MEASURE 4.B STATIONARY SOURCE RULEMAKING

Overview: The District will be analyzing District Rules to pursue additional emission reduction opportunities and implementing recently adopted District Rules throughout the CERP implementation period.

Recent Rule Amendments Affecting Arvin/Lamont Stationary Sources:

- Rule 4702 – Internal Combustion Engines
- Rules 4306/4320 – Boilers, Steam Generators, Process Heaters
- Rule 4905 – Flares

Rule Evaluation for Further Reduction from Arvin/Lamont Stationary Sources:

- Rule 4460 – Petroleum Refinery Fence-Line Air Monitoring
- Rule 4625 – Wastewater Separators
- Rule 4621 – Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants
- Rule 4402 – Crude Oil Production Sumps
- District Rules for Leak Detection and Repair (LDAR) rules for oil and gas industrial processes:
    - Rule 4623 – Organic Liquid Storage
    - Rule 4624 – Transfer of Organic Liquids
    - Rule 4401 – Steam Enhanced Wells
    - Rule 4409 – Light Oil/Gas Plants Rule 4455 – Petroleum Refineries, Gas Processing Facilities, and Chemical Plants

Emissions reductions achieved through the implementation of more stringent limits potentially required through these rule amendments will further contribute to reduced exposure to air pollution in the community. Community Steering Committee members, members of the AB 617-selected community, and the general public are encouraged to be involved in the upcoming rulemaking process for these rules.

Implementing Agency: Valley Air District

Measure Type: Regulatory

Quantifiable Emission Reductions: Potential reductions through the implementation of additional regulatory requirements as feasible.

MEASURE 4.C EXPEDITED AB 2588 ASSESSMENT

Overview: This strategy will expedite the review of stationary sources of pollution in the community that are currently being reassessed under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588).

Under AB 2588, all facilities located within the boundaries of the District are required to report toxic substances released into the air by their operation to the District. The District's responsibilities under the state's Air Toxics "Hot Spots" program are to:

- Identify Valley facilities that release toxic air contaminants as a result of their day to day operations,
- Collect and quantify emission data from equipment located at permitted facilities
- Identify facilities causing localized health impacts on nearby residents,
- Determine facility-wide health risks resulting from the emission of toxic air contaminants,
- Notify nearby residents and businesses of significant risk facilities in their vicinity, and
- Require that significant risk facilities reduce their risks to a level that no longer constitutes a significant risk to nearby residences and businesses.

The District's implementation of AB 2588, California's Air Toxics "Hot Spots" Information and Assessment Act, has resulted in major reductions in emissions of air toxics from existing sources in the San Joaquin Valley. Under this right-to-know law, the District has worked with Valley facilities to quantify emissions of air toxics, determine the health risk caused by those emissions, report emissions and any significant risks through written public reports and neighborhood public meetings, and take steps to reduce such risks.

This measure will result in the expedited AB 2588 reviews for facilities located within the Arvin/Lamont Community. More information about this effort can be found later in the section, "Additional Regulatory Measures to Reduce Emissions in the Community." Please refer to Appendix E for additional details about the District's Health Risk Assessment Process, and a table identifying the AB 2588 reassessment status of each facility within the community.

Implementing Agency: Valley Air District

Measure Type: Regulatory

Quantifiable Emission Reductions: Ongoing review of air toxics risk and mitigation under AB 2588 program.

SOURCES OF DUST IN THE COMMUNITY

BACKGROUND

In the Arvin/Lamont community, sources of dust emissions include unpaved roads and traffic areas, construction, open areas, and other earthmoving activities. Construction, demolition and other earthmoving activities emit less than 1 ton per year of PM2.5 in the community, paved and unpaved road dust emits 9.9 tons per year of PM2.5, and dust from open areas contributes 5.3 tons of PM2.5.

COMMUNITY CONCERNS AND COMMENTS

The Community Steering Committee expressed an interest in evaluating air quality impacts and felt it important to look to reduce road dust and other sources of dust in the community.

CURRENT CONTROL PROGRAMS

Regulation VIII (Fugitive PM10 Prohibition) / Dust Control Plan (DCP): The District's Regulation VIII series (Fugitive PM10 Prohibitions) was adopted in November 2001, and subsequently amended in 2004. This rule series contains a comprehensive suite of rules designed to reduce fugitive PM10 emissions from a range of sources including:

- Specified outdoor fugitive dust sources.
- Construction or demolition related disturbances of soil, including land clearing, grubbing, scraping, excavation, extraction, land leveling, grading, cut and fill operations, travel on the site, travel access roads to and from the site, and demolition activities.
- Outside storage and handling of any unpackaged material, which emits or has the potential to emit dust when stored or handled.
- Prevention and cleanup of mud and dirt whenever it is deposited (carryout and trackout) onto public paved roads
- Open areas 0.5 acres or more within urban areas, or 3.0 acres or more within rural areas that contain at least 1,000 square feet of disturbed surface area.
- Any paved, unpaved, or modified public or private road, street highway, freeway, alleyway, access drive, access easement, or driveway.
- Unpaved vehicle/equipment areas, including parking, fueling, service, shipping, receiving, and transfer areas.
- "Off-field" agricultural sources including, but not limited to, unpaved roads, unpaved vehicle/equipment traffic areas, and bulk materials.

Additionally, the Regulation VIII rules are implemented via the District's Dust Control Plan (DCP) program:
https://www.valleyair.org/busind/comply/PM10/compliance_PM10.htm

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Due to the priority that the Steering Committee placed on reducing dust in the community, a specific strategy has been developed to target emission reductions from

fugitive dust sources. The District is proposing enhanced enforcement of Regulation VIII rules to reduce fugitive dust from construction and earthmoving activities within the community. The District is also committed to working with Kern County, the City of Arvin, and other agency partners to address paved and unpaved road dust.

MEASURE 4.D FUGITIVE DUST ENFORCEMENT

Overview: The goal of this strategy is to limit the potential for localized air quality impacts associated with fugitive dust from construction/earthmoving activities and open areas subject to District Regulation VIII.

District rules limit fugitive dust emissions from construction, demolition, and earthmoving; bulk material storage; open areas; and unpaved roads and vehicle/equipment traffic areas. Furthermore, District rules restrict carryout and trackout of dirt and dust onto paved public roadways. Regulation VIII does not limit emissions from vehicles used in these projects.

Regulation VIII requires, a Construction Notification or Dust Control Plan for all construction activities in the District involving one or more acre of disturbed surface area. District staff reviews each Construction Notification and Dust Control Plan prior to the start of construction, to ensure that operators have committed to utilize required and effective work practices and mitigation measures to reduce fugitive dust emissions to within rule limitations. Additionally, District staff surveys and inspects these construction activities, responds to public complaints regarding fugitive dust, and provides training classes for those required to submit Dust Control Plans.

In reviewing the compliance history for the Arvin/Lamont community, it was determined that the District had received 13 complaints regarding fugitive dust related issues over the last 3 years, with the majority pertaining to truck traffic activities and open areas. Building on the District's existing inspection and complaint response efforts, the District will conduct at least one targeted enforcement effort within the Arvin/Lamont community during both the 2nd and 3rd quarters for the next five (5) years.

This fugitive dust reduction enforcement strategy is being included in the CERP in response concerns raised by CSC members regarding fugitive dust emissions in the community.

Implementing Agency: Valley Air District

Type of Action: Enforcement

MEASURE 4.E HEAVY-DUTY IDLING ENFORCEMENT

Overview: The goal of this strategy is to limit the potential for localized emissions from heavy-duty vehicles for failure to comply with the state's heavy-duty anti-idling regulation. Historically, the District has partnered with CARB to conduct anti-idling enforcement throughout valley communities.

The state's anti-idling Airborne Toxic Control Measure limits nonessential (or unnecessary) vehicle idling to specific time limits. It is applicable to all diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds. The diesel exhaust from excessive idling has the potential to impose significant adverse health and environmental impacts. Therefore, efforts to ensure compliance with the anti-idling regulation, especially near schools and residential areas, are important to reduce the potential for localized impacts within the community.

The District will partner with CARB to conduct additional targeted anti-idling enforcement efforts in the Arvin/Lamont community with established benchmarks. These benchmarks include anti-idling surveillance, to occur at least once per quarter, for the next 5 years. The District and CARB will work with the Community Steering Committee to identify heavy-duty vehicle idling "hot spots," especially those near schools, to aid in focusing the enforcement efforts.

Implementing Agency: Valley Air District and CARB

Type of Measure: Enforcement

Quantifiable Emission Reductions: Reduction in PM2.5, PM10, NOx, VOC, and CO emissions through higher compliance rates with the state regulation.

4.5. AGENCY PARTNERSHIPS

PESTICIDES IN THE ARVIN/LAMONT COMMUNITY

The Department of Pesticide Regulation (DPR) regulates pesticides under a comprehensive program that encompasses enforcement of pesticide use in agricultural and urban environments. DPR oversees a multi-tiered enforcement infrastructure and is vested by the EPA with primary responsibility to enforce federal pesticide laws in California. DPR directs and oversees County Agricultural Commissioner enforcement of pesticide and environmental laws and regulations locally, including enforcement for the Department of Consumer Affairs' Structural Pest Control Board. DPR requires farmers to notify the department before they apply any form of pesticide. Additionally, agricultural operators are subject to strict rules that limit overspray and drift from the approved site of application, and may be subject to fines for violations. Schools near a pesticide application must be notified by DPR to allow the school to take precautions to prevent exposure.

~~**Potential CERP Measure for CSC to decide:**~~

MEASURE 5.A REDUCING EXPOSURE TO PESTICIDES IN THE COMMUNITY

Overview: The Arvin/Lamont Community Steering Committee had several community concerns related to pesticide application and exposure reduction, including expanded monitoring, local notification, and mitigation practices such as application buffers within the community.

All pesticide-related emission reduction strategy suggestions submitted by the CSC were shared by the District with the California Department of Pesticide Regulation (DPR), Kern County, the Office of Environmental Health Hazard Assessment (OEHHA), and the California Air Resources Board (CARB). DPR, CARB, and OEHHA have committed to implement the following specific measures to reduce community exposure to pesticides:

Commitment	Action(s)	Responsible Entity	Timeline
Work with the Kern County Agricultural Commissioner & the CSC to identify pesticide use & agricultural practices common to the community	• Identify pesticides used in Arvin/Lamont • Communicate to CSC the frequency, amount, and ingredients of pesticide use in community	DPR	
Assist in the identification of pesticides of concern by the CSC & provide technical expertise to aid the CSC in prioritizing pesticide monitoring	• Develop a screening approach for agricultural pesticides commonly used in community • Support prioritization of pesticides for potential air monitoring based on screening criteria and other relevant information	OEHHA	
Provide technical support to the CSC regarding pesticide monitoring & provide feedback on analytical data gathered by the CSC	• Participate in field monitoring activities • Analyze pesticide samples • Support data analysis and interpretation	DPR & CARB	
	• Evaluate potential community health risks/impacts based on air monitoring results and other relevant information	DPR & OEHHA	
Engage with the CSC and the community on ongoing statewide regulatory and pesticide notification development efforts	• Regular updates to CSC on the temporary pilot notification efforts • Regular updates to CSC on timeline for notification in Kern County through statewide regulation • Provide opportunities for public engagement & feedback on regulatory development, including mitigation projects	DPR	
Engage with the CSC and the community on ongoing Sustainable Pest Management	• Regular updates to the CSC on the recommendations from the workgroup • Provide opportunities for engagement in the workgroup and development of recommendations Provide education on the benefits of sustainable pest management	DPR	
Engage with the CSC and the Community on enforcement procedures including complaints	• Provide clear steps and processes on how to report illegal application of pesticides • Provide updates to the CSC on complaint reports	DPR	

	• Provide education of processes on how DPR handles illegal application of pesticides Provide engagement opportunities the CSC to provide recommendations on how to improve current enforcement mechanisms		

Furthermore, Kern County will engage with CARB, DPR, the District, and the Community Steering Committee regarding expanding exposure mitigation practices in the community and development of a local pesticide notification system when DPR has developed a recommendation for statewide notification.

Implementing Agency: Department of Pesticide Regulation, Kern County, Office of Environmental Health Hazard Assessment, and California Air Resources Board

LAND USE IN THE COMMUNITY

Land use is the characterization of land based on what can be built on it and what the land can be used for. It is important to note that local air districts do not have authority over land use. Land use decisions are directly under the authority of Land use agencies (e.g. City and County government agencies). These agencies develop land use plans and make decisions about how they grow and expand. The design of development projects in a community significantly influences how people travel, and land use agencies typically have principal responsibility for approving development projects within their jurisdictions for a variety of land use types such as residential (single or multi-family, etc.), commercial (fast food, shopping center, retail, etc.), and industrial (warehouse distribution centers, port operations, etc.). Through the land use approval process, these agencies are responsible for implementing land use strategies that promote increased walkability, commute alternatives and cleaner transit fleets resulting in air quality benefits within a community.

Land use strategies may result in the reduction of vehicle trips by designing development to be more suitable for walking, bicycling, and transit. These land use strategies are typically outlined as measures and goals within a City or County general plan, which is the primary "long range" planning document used to locate future development and provides the framework within which decisions on how to grow, provide public services and facilities, and protect and enhance the environment are made. For information about the City of Arvin General Plan, please refer to https://www.arvin.org/166/City-Planning

Land use agencies' decisions are critical in contributing to the improvement in air quality within a community and should be geared towards promoting strategies aimed at reducing vehicle miles travelled by increasing community walkability, implementing commute alternatives, and supporting infrastructure for cleaner transit fleets.

COMMUNITY CONCERNS AND COMMENTS

A primary concern expressed by Steering Committee members during meeting discussions was that heavy-duty truck exhaust, specifically attributable to truck traffic along the main highways through Arvin and Lamont, result in increased exposure to emissions for residents that live near these heavy duty trucking corridors and major thoroughfares in the community. To address community member concerns, measures included in this section will focus both on transportation strategies that reduce exposure to mobile source emissions resulting from land use decisions.

For example, suggestions from community steering committee members included the installation of vegetative barriers to inhibit emission transport from thoroughfares into neighboring communities, support for truck rerouting studies, and supporting the replacement of older truck fleets with cleaner technologies.

As some of these suggestions relate to land use issues for which the District does not have authority, the District's approach is to provide support for funding for zero and

near-zero heavy-duty trucks, and to support the land use planning process through the California Environmental Quality Act (CEQA). The District is supportive of measures and policies the land use agency can implement toward making the communities more transit-, bicycle-, and pedestrian-friendly, avoid land use conflicts that lead to toxics and nuisance problems, and minimizing the need to and/or mitigate air quality impacts of individual development proposals.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN THE COMMUNITY

Several strategies have been identified under this Land Use and Transportation section that span from advocating issues, providing incentives, collaborating with the local land use agency (i.e. City of Arvin, and Kern County), to providing input through the land use process. Land use and transportation strategies developed to reduce emissions through incentives are described below.

MEASURE 5.B SUPPORT LAND USE AGENCIES

Overview: The purpose of this measure is to facilitate inter-agency collaboration between the City of Arvin, Kern County, and Kern Council of Governments to promote environmentally mindful alternative commute options through early discussion of related land use planning initiatives.

Mobile source emissions represent the vast majority of NOx emissions within the Arvin/Lamont Community. Reducing emissions from motor vehicles through the implementation of alternate modes of transportation directly contributes to decreasing public exposure to vehicle emissions, such as diesel particulate matter, which adversely affects human health.

Land use decisions are critical in contributing to the improvement in air quality within a community and should be geared towards promoting strategies aimed at reducing vehicle miles traveled by increasing community walkability. Examples of such strategies are listed below:

- Bicycle infrastructure
- Infrastructure to support alternative modes of transportation (electric vehicles, near-zero emissions vehicles)
- Satellite offices/telecommuting centers to reduce or eliminate employee commutes

Implementing Agency: Valley Air District, City of Arvin, Kern County, and Kern Council of Governments

Measure Type: Land Use

Quantifiable Emission Reductions: Minimize emissions through reduced vehicle miles travel and promotion of cleaner fuels.

MEASURE 5.C HEAVY-DUTY TRUCK REROUTING

Overview: Community Steering Committee members have suggested that a study should be performed to assess the existing heavy-duty diesel truck routes that run through the communities of Arvin and Lamont. The District will work with Caltrans, Kern COG, City of Arvin, Kern County to support ongoing efforts to study truck routes along state highways in the community. The District will work with the appropriate agencies to seek additional funding, as necessary, to support this study.

Jurisdictional Issues: It should be noted that the District has no authority over how agencies allow land under their jurisdiction to be used. These land-use decisions, such as truck rerouting, are historically the responsibility, under state law, of cities and counties, or, in some cases, state and federal agencies responsible for transportation corridors, state and federal parks, and other properties. AB 617 does not provide the District with new land-use regulatory authority, so land-use authority remains with cities, counties, and state and federal land-use agencies, as discussed in CARB's Blueprint (see "Who Has the Authority to Implement Actions?", page 26 of the Blueprint). The District is committed to working with the implementing agencies to support the ongoing study and to coordinating conversations with the implementing agencies and the CSC as necessary.

Implementing Agency: City of Arvin, Kern County, Caltrans, Kern Council of Governments

Type of Measure: Partnership

Quantifiable Mitigation: Minimize exposure to diesel particulate matter emissions through potential truck routing alternatives.

MEASURE 5.D ADDRESS POTENTIAL IMPACTS FROM IDLE OIL WELLS IN COMMUNITY

Overview: Community Steering Committee members suggested that the Arvin/Lamont community should be engaged in ongoing agency efforts to address potential impacts from idle, orphaned, and abandoned oil wells in the Arvin/Lamont community. It should be noted that the District has no authority over idle oil well regulation compliance.

The District has made the request available to the responsible agency, California Geologic Energy Management (CalGEM), and commits to working with CalGEM on the following:

CalGEM will work with the District to keep the CSC informed regarding opportunities for public participation in CalGEM efforts to assess, prioritize, and address idle wells throughout the state, including within the Arvin/Lamont community.

Implementing Agency: California Geologic Energy Management (CalGEM)

Type of Action: Partnership

4.6. OUTREACH

CURRENT OUTREACH PROGRAMS

The District's Outreach and Communications team conducts air quality outreach throughout all eight counties of the San Joaquin Valley. The District coordinates events, delivers presentations, responds to the media 24/7, manages social networks, pilots outreach campaigns like the Healthy Air Living (HAL) Schools and the winter residential "No Burn" programs, and connects with the public in multiple languages across any medium. In addition to offering media interviews, answering questions posed by the public, partnering with local institutions, and accepting speaking engagements, the District also conducts paid advertising and informational campaigns regularly to spread air quality awareness across social media, digital networks, television, radio, billboards, and other venues. Through the development of innovative tools like RAAN and the Valley Air App, almost 12,000 registered users receive automated notifications when the air quality at any location they choose to follow becomes unhealthy, allowing them to make informed decisions about their outdoor activities to limit their own exposure.

COMMUNITY CONCERNS AND COMMENTS

The Committee recommended that the District engage in a wide variety of multi-lingual outreach efforts via both traditional and social media to allow community members to see and learn about air quality issues, take advantage of grant programs, and provide real-time access to information from air monitoring equipment deployed as part of the AB 617 process. Members of the Steering Committee acknowledged the District's ongoing air quality outreach and education efforts, but expressed that effectiveness could be improved by increasing the volume and types of outreach, focusing it to a truly localized level, and using partnerships with key local organizations to better understand how to deliver needed information to the Arvin/Lamont community residents.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

The Community Air Quality Outreach Strategies go beyond current outreach efforts to provide community-specific information about local conditions and measures the public can take to protect themselves during episodes of poor air quality through new media campaigns, workshops hosted in partnership with local civic and community organizations, and other outreach methods as identified by the community and the District.

MEASURE 6.A MULTILINGUAL OUTREACH TO INCREASE COMMUNITY AWARENESS AND KNOWLEDGE OF AIR QUALITY

Overview: The goal of this strategy is to increase community awareness of available tools to keep informed of real-time changes in air quality, clean air efforts and how communities can get involved through multi-lingual educational campaigns, videos and partner workshops. The strategy looks to focus outreach on concerns raised by the community, including building awareness on the impacts of dust pollution, traffic congestion, heavy-duty truck use and pesticide use. Additionally, the District commits to working with the CSC to educate the community and increase public understanding of what conditions create poor air quality, the health impacts of a poor air quality episode, and the availability of tools to make informed decisions about when to limit their exposure.

This strategy would aim to increase air quality understanding among residents, community members and small businesses in the Arvin/Lamont area. Concurrently, the District would aim to increase the use of available air quality tools, including the Valley Air App social media campaigns. The measure would seek to establish partnerships with local small businesses and community organizations to educate them on the tools and funding resources available to them and invite the public to workshops at these locations or other sites commonly available to the public (such as libraries, schools, and community centers) and on Zoom or other digital platforms. Both the social media outreach and live workshops would promote real-time tools such as myRAAN website, the Valley Air App, the Real-time Outdoor Activity Risk (ROAR) Guidelines, the wildfire page of the District's website, as well as information about general air quality education, wildfire smoke impacts, health effects, and similar topics. This strategy aims to increase myRAAN website registrations, Valley Air App downloads, and social media followers among members of the Arvin/Lamont community.

Annual goals for these actions include:

- Attend/host 4 community meetings, in-person or online, to share information
- 1 community targeted social media campaign

Implementing Agency: Valley Air District

Type of Measure: Outreach

Quantifiable mitigation: Minimize emissions and exposure around schools.

MEASURE 6.B REDUCE ILLEGAL BURNING THROUGH RESIDENTIAL OPEN BURNING EDUCATION

Overview: The goal of this strategy is to reduce illegal burning of residential waste, such as trash, through outreach and education while focusing on areas of concern identified by the CSC. It is important to continue to educate residents of the harmful localized emissions created through the burning of residential garbage. Smoke from burning trash and yard waste contain toxic pollutants that are harmful to human health.

This strategy would include working with the City of Arvin, Kern County, and the local fire agencies to understand the illegal open burning issues within the AB 617 community. The District would then establish a series of public workshops to educate Arvin/Lamont residents about illegal open burning, to help the community better understand the health impacts of burning waste, and to address questions and concerns interactively and accessibly within a forum setting either in person or in an online platform such as Zoom. In-person workshops would take place in locations commonly available to the public such as libraries, schools, and community, health, or recreation centers when possible. Videos could be used as an outreach tool and be made available in languages such as Spanish, and others as requested.

Implementing Agency: SJVAPCD, City of Arvin, Kern County, and local fire agencies

Type of Measure: Outreach

Quantifiable Emission Reductions: Reduction in localized PM2.5, PM10, NOx, VOC, and CO emissions through higher compliance rates.

EXPOSURE REDUCTION STRATEGIES FOR SCHOOLS

SCHOOLS IN THE ARVIN/LAMONT COMMUNITY

The Arvin/Lamont AB 617 community contains 12 schools, primarily represented by Arvin Union School District and Lamont Elementary School District. There are also two high schools from the Kern High School District and a public charter school. Enlisting the participation and support of these schools in the effort to reduce children's exposure is key to ensuring that benefits are as widespread as possible. Targeting schools like Arvin High School, Haven Middle School and Sierra Vista Elementary, located adjacent to the city's main highway, will help protect the most vulnerable populations. All children, but especially young children, are considered sensitive receptors with respect to air pollution and it is vital that their protection from unhealthy air during their developing years is made a priority.

COMMUNITY CONCERNS AND COMMENTS

A primary concern expressed by Steering Committee members is to ensure cleaner air for children at school while fully engaging local school districts and parents in clean-air efforts. Committee members expressed a desire to use a mobile application or tool to specifically engage youth and equip them with the knowledge and understanding of how to protect themselves from poor air quality. Members were also interested in educating parents about idling risks, local pesticide risks, engaging students through social media and targeted air quality education presentations for schools in the boundary. The Steering Committee also supported incorporating an "Emissions Free Zone" model into the outreach strategies developed.

CURRENT PROGRAM

The District's Healthy Air Living (HAL) Schools program empowers participating schools to make informed decisions about outdoor activities based on real-time air quality conditions. School staff sign up for automated notifications when air quality becomes harmful using the Real-time Air Advisory Network (RAAN) tool, and receive health- protective recommendations for the modification or cancellation of outdoor activities accordingly through the Real-time Outdoor Activity Risk (ROAR) guidelines. The program includes access to resources like anti-idling signs, air quality widgets for school websites, bilingual informational materials, and bilingual educational speakers for students, parents, and staff. This program will be expanded to include an "Emissions Free Zone" model into the coordination with schools.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Strategies developed within the community include increasing enrollment of schools in the HAL School program to protect children from exposure to unhealthy outdoor air through the widespread adoption of RAAN and ROAR and educating school staff, administration, and parents about the negative impacts of idling.

MEASURE 6.C REDUCE CHILDREN'S EXPOSURE THROUGH INCREASED ENROLLMENT IN THE HEALTHY AIR LIVING SCHOOLS PROGRAM AND THE ESTABLISHMENT OF EMISSION FREE ZONES

Overview: The goal of this measure is to reduce children's exposure to unhealthy air by increasing the participation and engagement of schools in the Healthy Air Living (HAL) Schools program. HAL Schools staff works with community schools to decrease vehicle idling, limit children's outdoor activity during episodes of poor air quality, and educate school staff, parents and students about protecting themselves from poor air quality and making decisions to reduce their personal contribution to air pollution.

Additionally, as a part of this measure, the District commits to work with school staff and students to educate the public, educators and parents regarding having an "Emission Free Zone" around schools, thereby reducing negative health impacts on student's health caused by emissions generated from vehicle idling. To help in this effort, "No Idling" signage in English and Spanish will be distributed to schools within the boundary. Additionally, informational videos will be used as an outreach tool and will be made available in languages, such as Spanish, and others on an as needed basis.

Implementing Agency: Valley Air District

Measure Type: Outreach

Quantifiable mitigation: Minimize emissions and exposure around schools.

4.7. OTHER CSC-SUGGESTED ITEMS

Through the CERP development process, the CSC worked through several exercises to develop, refine, and ultimately vote to support clean air strategies to improve air quality challenges in the Arvin/Lamont Community. In this process, several measures were identified, but voted by the CSC to be excluded from the final CERP. These measures are listed below:

INCENTIVE PROGRAM FOR INSTALLATION OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

This strategy would have allocated up to $200,000 in incentives funding for publically accessible charging infrastructure to private and public entities in the Arvin/Lamont community.

Quantifiable Emission Reductions: Reduce emissions indirectly through transitioning to zero-emissions technology.

CSC support: 64% of the committee voted "No" to including this in the final CERP.

NEW STREET SWEEPER

This strategy would have allocated up to $400,000 for the purchase of two new street sweepers to operate within the Arvin/Lamont AB 617 community.

Quantifiable Emission Reductions: TBD with CARB

CSC support: 85% of the committee voted "No" to including this in the final CERP.

CAR SHARING PROGRAM FOR RESIDENTS IN THE COMMUNITY

This strategy would have provided up to $250,000 in funding for a partnering car share provider to either launch a new program in the Arvin/Lamont community and/or expand on the existing program in the Arvin/Lamont community.

Quantifiable Emission Reductions: Reduce emissions through transitioning to zero-emissions technology.

CSC support: 51% of the committee voted "No" to including this in the final CERP.

4.7.4.8. OVERVIEW OF CALIFORNIA AIR RESOURCES BOARD'S STATEWIDE ACTIONS

The following section was provided by the California Air Resources Board for CSC review and inclusion in the CERP:

Community-scale air pollution exposure is caused by many factors, including the cumulative impacts from multiple pollution sources. Effective solutions require multiple strategies at both the statewide and local level to deliver new emissions reductions directly within these communities.

The California Air Resources Board (CARB) has adopted a number of comprehensive air quality and climate plans over the last several years that lay out new emissions reduction strategies. These plans include the State Strategy for the State Implementation Plan,[8] the California Sustainable Freight Action Plan,[9] California's 2017 Climate Change Scoping Plan,[10] and the Short-Lived Climate Pollutants Reduction Strategy,[11] the 2020 Mobile Source Strategy,[12] along with a suite of incentive programs. CARB is continuing to develop comprehensive air quality and climate plans that will further reduce emissions, including the 2022 State Strategy for the State Implementation Plan.[13] The Community Air Protection Blueprint[14] further identified additional actions to reduce the air pollution burden in heavily impacted communities throughout the State. Together, these plans provide a foundation for the new actions identified as part of this community emissions reduction program.

This section illustrates CARB's role in the community emissions reduction program, by broadly describing the regulatory and incentive-based foundational statewide actions CARB has taken to reduce emissions statewide. It also highlights specific actions that address areas of concern identified by the Arvin/Lamont community. CARB's potential enforcement strategies are described in the "CARB Enforcement" section of this CERP.

INCENTIVE PROGRAMS

CARB operates incentive programs that reduce the costs of developing, purchasing, or operating cleaner technologies. The programs help ensure cleaner cars, trucks,

[8] California Air Resources Board, *Revised Proposed 2016 State Strategy for the State Implementation Plan*, March 7, 2017, available at: https://ww3.arb.ca.gov/planning/sip/2016sip/rev2016statesip.pdf.
[9] California Department of Transportation, *California Sustainable Freight Action Plan*, July 2016, available at: https://dot.ca.gov/programs/transportation-planning/freight-planning/california-sustainable-freight-action-plan.
[10] California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017, available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan.
[11] California Air Resources Board, *Short-Lived Climate Pollutant Reduction Strategy*, March 2017, available at: https://ww2.arb.ca.gov/resources/documents/slcp-strategy-final.
[12] California Air Resources Board, *2020 Mobile Source Strategy*, October 2021, available at: https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy.
[13] California Air Resources Board, 2022 State Strategy for the State Implementation Plan, available at: https://ww2.arb.ca.gov/resources/documents/2022-state-strategy-state-implementation-plan-2022-state-sip-strategy.
[14] California Air Resources Board, *Final Community Air Protection Blueprint for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring*, October, 2018, available at: https://ww2.arb.ca.gov/capp-blueprint.

equipment, and facilities are operating in our neighborhoods by driving the development of new, cleaner technologies, and by accelerating their sale and adoption. Specifically, they accelerate the introduction of advanced technology vehicles and equipment, accelerate the turnover of older and higher emitting vehicles and equipment, and increase access to clean vehicles and transportation in "disadvantaged communities" and "lower-income households", as identified and defined by California statute[15].

While CARB is responsible for program oversight, some programs are implemented as a partnership with local air districts. Examples of CARB incentive programs include:

- Carl Moyer Memorial Air Quality Standards Attainment Program[16]
  - The AB 617, Community Air Protection Incentives[17] are implemented by the air district through this program, details are below.
- Proposition 1B: Goods Movement Emission Reduction Program,[18]
- Funding Agricultural Replacement Measures for Emission Reductions Program,[19] and
- Low Carbon Transportation Investments and Air Quality Improvement Program (which includes the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project).[20]

Community Air Protection Incentives

Since 2017, the California Legislature has appropriated money annually from the Greenhouse Gas Reduction Fund (GGRF) for incentives to support AB 617. In advance of the first 2018 community selection, the Legislature directed CARB to focus the appropriated Fiscal Year (FY) 2017-18 CAP incentive funds in disadvantaged and low-income communities. These incentives are applied through the Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) and the Proposition 1B Goods Movement Emission Reduction Program (Proposition 1B Program) to provide immediate air quality benefits in heavily impacted communities.

Starting from FY 2017-18 the Legislature has appropriated $704 million in CAP incentives between FYs 2017-18 and 2019-20, and an additional $260 million in FY 2021-22 (Table 1 in Appendix A).[21] The Legislature initially appropriated incentives to generate immediate air quality benefits in communities most likely to participate in AB 617 – primarily disadvantaged communities – as the Program began to develop. Additionally, the Board set specific priority population investment targets for the funds:

[15] California Health and Safety Code § 39711.
[16] For more information on the Carl Moyer Memorial Air Quality Standards Attainment Program, visit: https://ww2.arb.ca.gov/our-work/programs/carl-moyer-memorial-air-quality-standards-attainment-program.
[17] For more information on the Community Air Protection Incentives, visit: https://ww3.arb.ca.gov/msprog/cap/capfunds.htm
[18] For more information on the Proposition 1B: Goods Movement Emission Reduction Program, visit: https://ww2.arb.ca.gov/our-work/programs/proposition-1b-goods-movement-emission-reduction-program.
[19] For more information on the Funding Agricultural Replacement Measures for Emission Reductions Program, visit: https://ww2.arb.ca.gov/our-work/programs/farmer-program.
[20] For more information on the Low Carbon Transportation Investments and Air Quality Improvement Program, visit: https://ww2.arb.ca.gov/our-work/programs/low-carbon-transportation-investments-and-air-quality-improvement-program.
[21] California Air Resources Board, *December 2021 Report on Assembly Bill 617 CAP Incentives Appendix,* available at: https://ww2.arb.ca.gov/sites/default/files/2022-01/CAP%20Status%20Board%20Memo%20Appendix%202021-12-20_0.pdf

70 percent in and benefiting disadvantaged communities and 80 percent in and benefiting disadvantaged or low-income communities. So far, air districts have expended $372 million in CAP incentives on projects. They expended $303 million or 81 percent in disadvantaged communities, and $350 million or 94 percent in disadvantaged and low-income communities.[22]

Through May of 2021, air districts have expended $372 million in CAP incentives, with $108 million spent in AB 617 selected communities. Starting from FY 2017-18 the Legislature has appropriated $704 million in CAP incentives between FYs 2017-18 and 2019-20, and an additional $260 million in FY 2021-22. The CAP program recently released an updated report (December 2021).[23] The majority of the remaining $264 million spent so far has been in other disadvantaged and low-income communities throughout the State.

To expand on initial funding options in the CAP Guidelines, CARB developed a process for the air districts to fund new projects that are responsive to community priorities and to expand stationary source incentives. CARB staff worked with the air districts and CAPCOA through late 2019 and early 2020 to ensure the process maximized flexibility to support projects asked for by community members while simultaneously meeting the need to assess emissions reductions and other benefits. Agency staff shared draft language with the public in May 2020 and incorporated their guidance as well as feedback from the air districts into the final version in October 2020[24].

The revised guidelines allow air districts to expeditiously develop and fund projects to reduce emissions from stationary sources and to address those concerns identified and prioritized in AB 617 community emissions reduction programs. As a criterion for CARB's approval of a Community Emissions Reduction Program, air districts must describe the level of support for the CERP and its strategies by the Community Steering Committee. Subsequent proposed project plans to implement incentive-based strategies must also document strong, widespread, and clear community support and include descriptions of community benefits, both those benefits that are quantifiable and those more qualitative in nature. The graphic below illustrates the process by which a Project Plan is developed and approved. This iterative process allows districts and CARB to account for complicated, unique, or unusual projects and ensure that they will be responsive to community needs.

[22] California Air Resources Board, *2021 Report on Assembly Bill 617 Community Air Protection Incentives,* available at: https://ww2.arb.ca.gov/sites/default/files/2022-01/CAP%20Status%20Board%20Memo%202021-12-20_0.pdf
[23] California Air Resources Board, *December 2021 Report on AB 617 Community Air Protection Incentives*, available at: https://ww2.arb.ca.gov/resources/documents/december-2021-report-ab-617-community-air-protection-incentives.
[24] For more information on the 2019 Guidelines, visit: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-incentives

Figure 4-10 Community Air Protection Project Process

The San Joaquin Valley Air Pollution Control District (APCD) created the first of these plans pursuant to the community emissions reduction program of the South-Central Fresno community, to fund a study of truck traffic within the community. The air district worked with the community to develop the Project Plan, with the intent to better understand the flow of truck traffic within South Central Fresno. The air district and the community will use the results of the study to determine whether rerouting truck traffic could reduce exposure, and to explore if and how such traffic could be rerouted effectively. CARB staff has additionally reviewed and approved other Project Plans submitted by districts such as the San Joaquin Valley APCD, the Imperial County APCD, and South Coast Air Quality Management District (AQMD). Project plans include lawn and garden equipment replacement, alternatives to open agricultural burning, replacement of nut harvesting equipment with low dust alternatives, equipment to reduce emissions from hexavalent chrome plating, road paving, urban greening, and an expanded/improved school flag program.

Regulatory Programs

Federal, State, and local air quality agencies all work together to reduce emissions. At the federal level, the U.S. Environmental Protection Agency (U.S. EPA) has

primary authority to control emissions from certain mobile sources, including sources that are all or partly under federal jurisdiction (e.g., some farm and construction equipment, aircraft, marine vessels, locomotives), which it shares in some cases with air districts and CARB. The U.S. EPA also establishes ambient air quality standards for some air pollutants.

At the State level, CARB is responsible for controlling emissions from mobile sources and consumer products (except where federal law preempts CARB's authority), controlling toxic emissions from mobile and stationary sources, controlling greenhouse gases from mobile and stationary sources, developing fuel specifications, and coordinating State-level air quality planning strategies with other agencies.

Regionally, air districts are primarily responsible for controlling emissions from stationary and indirect sources (with the exception of consumer products in most cases) through rules and permitting programs within their regions.

CARB regulatory programs are designed to reduce emissions to protect public health, achieve air quality standards, reduce greenhouse gas emissions, and reduce exposure to toxic air contaminants. CARB establishes regulatory requirements for cleaner technologies (both zero and near-zero emissions) and their deployment into the fleet, for cleaner fuels, and to ensure in-use performance. CARB's regulatory programs are broad – impacting stationary sources, mobile sources, and multiple points within product supply chains from manufacturers to distributors, retailers, and end-users. CARB's regulations affect cars, trucks, ships, off-road equipment, consumer products, fuels, and stationary sources.

One important and relevant regulatory authority of CARB's is to adopt measures to reduce emissions of toxic air contaminants from mobile and non-mobile sources, known as Airborne Toxic Control Measures (ATCM).[25] These regulatory measures include process requirements, emissions limits, or technology requirements. Additionally, CARB implements the Statewide Air Toxics "Hot Spots" Program[26] to address the health risk from toxic air contaminants at individual facilities across the State. The Air Toxics "Hot Spots" Program includes several components to collect emissions data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels.

Under the Air Toxics "Hot Spots" Program, air districts are required to set a threshold for facilities that pose a significant health risk and prioritize facilities for health risk assessments. Air districts also establish a risk value above which facilities must conduct a risk reduction audit and emissions reduction plan. Facilities must develop these health risk assessments, risk reduction audits, and emission reduction plans.

[25] California Health and Safety Code § 39650 et seq.

[26] Assembly Bill 2588, Air Toxics "Hot Spots" Information and Assessment Act, Connelly, Statutes of 1987, California Health and Safety Code § 44300 et seq.

CARB provides technical guidance to support smaller businesses conducting health risk assessments and developing emissions reduction plans.

Additionally, CARB has pursued enforceable agreements with industry that result in voluntary but enforceable adoption of the cleanest technologies or practices and provide assurance that emissions reductions will be realized. CARB's agreement with the Union Pacific Railroad Company and BNSF Railway Company to accelerate introduction of cleaner locomotives in the South Coast Air Basin is an example of an enforceable agreement.

CARB Actions Related to the Arvin/Lamont Community

This section highlights CARB actions that specifically relate to the Arvin/Lamont community. This list should not be interpreted as comprehensive or exhaustive, but rather illustrative of some of the major statewide strategies driving emissions reductions in conjunction with those local level strategies identified in this community emissions reduction program. Additional CARB foundational strategies can be found in Appendix D and Appendix F of the Community Air Protection Blueprint.[27] The list of CARB actions and their anticipated benefits in current AB 617 communities are also available on the Program CommunityHub.[28]

Recently Adopted CARB Regulations benefitting Arvin/Lamont

CARB adopted the Advanced Clean Trucks Rule[29] in June 2020 requiring truck manufacturers to transition from producing diesel trucks and vans to electric zero-emission trucks including heavy-duty vehicles beginning in 2024. Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines would be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b – 3 truck sales, 75% of Class 4 – 8 straight truck sales, and 40% of truck tractor sales. This rule also requires that fleets report information on a one-time basis about their vehicles to support future zero-emission fleet rules.

In August 2020 CARB adopted the Heavy-Duty Engine and Vehicle Omnibus Regulation and Associated Amendments[30] which will require manufacturers to comply with tougher emissions standards, overhaul engine testing procedures, and further extend engine warranties to ensure that emissions of NO_x (oxides of nitrogen, a key

[27] California Air Resources Board, *Final Community Air Protection Blueprint for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring*, October, 2018, available at: https://ww2.arb.ca.gov/capp-blueprint.

[28] Community Air Protection Program Communities: https://ww2.arb.ca.gov/capp-communities

[29] For more information on the Advanced Clean Trucks Rule, visit: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks.

[30] For more information on the Heavy-Duty Engine and Vehicle Omnibus Regulation and Associated Amendments, visit: https://ww2.arb.ca.gov/our-work/programs/heavy-duty-low-nox

component of smog) are reduced to help California meet federal air quality standards and critical public health goals. The regulation is expected to have a significant impact on communities adjacent to railyards, ports and warehouses that typically experience heavy truck traffic. These trucks often idle, move slowly and make frequent stops – all actions that increase NOx emissions. Today's heavy-duty trucks do not control NOx effectively during such "low load" conditions. The new standards will reduce NOx emissions by 90 percent or more when trucks are operating under these low load real-world operations. All components of the new rule will be phased in, allowing engine manufacturers time to prepare for compliance. The NOx standards that engines must meet will be cut to approximately 75 percent below current standards beginning in 2024, and 90 percent below current standards in 2027.

In December 2021 CARB approved the proposed amendments to the Small Off-Road Engine (SORE) Regulations[31]. The amended regulation will accelerate the transition of SORE equipment to zero-emission equipment (ZEE) by requiring most newly manufactured small off-road engines such as those found in leaf blowers, lawn mowers and other equipment be zero emission starting in 2024. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028. Despite their small size, these engines are highly polluting. The volume of smog-forming emissions from this type of equipment has surpassed emissions from light-duty passenger cars and is projected to be nearly twice those of passenger cars by 2031. Today, a commercial operator using one backpack leaf blower for one hour generates the same smog-forming emissions as a car driving 1,100 miles. These regulations will reduce emissions of smog-forming emissions by 72 tons per day. The amended regulation will set SORE emission standards to zero in two phases. First, for model year (MY) 2024 and all subsequent model years, emission standards will be zero. The second phase will be implemented starting in MY 2028, when the emission standards for generators and large pressure washers will be zero. Incentive funds will be available to commercial purchasers of new zero-emission equipment through CARB's Clean Off-Road Equipment Voucher Incentive Project (CORE), which was created to accelerate deployment of cleaner off-road technologies.

In December 2021 CARB approved the Heavy-Duty Inspection and Maintenance program[32], which acts as a 'smog check' regulation for medium- and heavy-duty trucks and buses. While these heavy-duty vehicles with a gross vehicle weight rating (GVWR) greater than 14,000 pounds comprise only 3 percent of all vehicles on California roads, they are responsible for more than 50 percent of nitrogen oxides and fine particle diesel pollution from all mobile sources in the state. The program will cover roughly 1 million heavy-duty trucks and buses operating in California. The twice-a-year inspections will ensure that the emissions control systems maintain the same efficiency as the vehicle ages. By 2037, the program is estimated to deliver reductions of 82 tons per day of NOx and fine particle diesel pollution. The Board also directed a

[31] For more information on the Small Off-Road Engine Regulation, visit: https://ww2.arb.ca.gov/our-work/programs/small-off-road-engines-sore

[32] For more information on the Heavy-Duty Inspection and Maintenance Program, visit: https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program

four-times per year testing frequency for trucks with on-board diagnostics to be phased in over time. The new program is expected to yield $75 billion in health benefits, prevent 7,500 air-quality related deaths and 6,000 hospitalizations and emergency room visits from 2023 to 2050. These benefits are 18 times the estimated cost of the program at $4 billion.

Upcoming CARB Regulations

Advanced Clean Cars II – CARB staff is developing the Advanced Clean Cars II regulations, which will seek to reduce criteria and greenhouse gas emissions from new light- and medium-duty vehicles beyond the 2025 model year, and increase the number of zero emission vehicles for sale. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program.

Advanced Clean Fleet Rules – CARB is developing a medium and heavy-duty zero-emission fleet regulation with the goal of achieving a zero-emission truck and bus California fleet by 2045 everywhere feasible and significantly earlier for certain market segments such as last mile delivery and drayage applications. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets.

Cargo Handling Equipment Regulation Amendments – 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 and was fully implemented by the end of 2017. CARB staff is currently assessing the availability and performance of zero-emission technology to further reduce emissions. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/cargo-handling-equipment.

Chrome Plating Control Measure Amendments – This strategy will amend the current regulation on chrome plating to further reduce toxic air contaminants at chrome plating facilities, with a focus on alternative technology. In September 2020, a meeting of the technical work group was held to discuss concepts. A tentative Air Toxics Control Measure (ATCM) timeline is to finalize concepts in late 2021 and hold workshops for regulation in winter and spring of 2022. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/chrome-plating-atcm.

In-Use Locomotive Regulation – In the absence of federal action to address harmful emissions from locomotives, CARB is developing the In-Use Locomotive Regulation to reduce criteria pollutants, toxic air contaminants, and greenhouse gas emissions. The In-Use Locomotive Regulation is intended to be implemented statewide and aims to address regional pollution and long-standing environmental justice concerns with communities near railyards and other locomotive operations. Board consideration is tentatively scheduled for 2022. For more information, visit:

https://ww2.arb.ca.gov/our-work/programs/reducing-rail-emissions-california.

Transport Refrigeration Unit Regulations – Transport refrigeration units congregate at distribution centers, railyards, and other facilities, resulting in the potential for health risks to those that live and work nearby. CARB is working through a public process to consider new requirements to transition the transport refrigeration units fleet to zero emission operations by requiring both zero emission technology and supporting infrastructure. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/new-transport-refrigeration-unit-regulation.

ESTIMATED EMISSION REDUCTIONS FROM CARB MEASURES

The statewide strategy emission benefits provided in the CERP accounts for the combined effects of regulations currently under rulemaking for a given future year. It means that potential emission reductions from proposed regulations for a given year are applied on top of each other. For example, if two regulations are applicable to the same source of emissions (e.g., trucks) then a new baseline is established by applying the reductions from the first proposed regulation to the original baseline, and then reductions from the second regulation are calculated based on the newer established baseline.

It is important to note that most of these regulations are in early phases of development and their adoption and implementation timelines are not well established. Additionally, the emission inventory used to estimate the potential emission reduction factors for these strategies are derived from draft inventories that will continue to be revised through the regulation development process. Once a statewide strategy or regulatory measure is adopted, emission reduction factors and related benefits will be updated to reflect the final inventory used in the regulation. As such, the draft statewide emissions reduction estimates presented in the CERP should only be used as a rough estimate that are subject to change in future.

CARB has estimated the emission reductions benefits for some of the proposed statewide measures as shown in Table 4-1 for the 2026 and 2031 milestone years for the Arvin/Lamont Community.

Table 4-1 Estimated Emission Reductions from CARB Measures in the Arvin/Lamont Community

Proposed Statewide Measures	**Estimated Potential Emission Reductions in Future Year (tons per year)**							
	PM2.5		**DPM**		**NOx**		**VOC**	
	2026	2031	2026	2031	2026	2031	2026	2031
Advanced Clean Fleet	0.02	0.15	0.01	0.07	0.73	5.31		
Advance Clean Car II	0.003	0.05	0.00003	0.0002	0.10	1.21	0.05	0.94
Heavy-Duty Inspection and Maintenance	0.34	0.38	0.36	0.40	31.57	39.12		
Small Off-Road Engine Amendment	0.05	0.13			0.54	1.72	4.12	11.85
Transport Refrigeration Unit Regulation	0.18	0.39	0.19	0.41	0.56	1.33	0.07	0.18
Total	**0.60**	**1.09**	**0.56**	**0.88**	**33.50**	**48.70**	**4.24**	**12.98**

CARB Enforcement

Arvin/Lamont 3 Year History
The California Air Resources Board's (CARB) Enforcement Division aims to develop partnerships with community organizations to co-lead the development of community-focused action plans that reduce disproportionate exposures in disadvantaged communities. CARB has heard the concerns of the community that has been shared with us during the Arvin/Lamont CSC Meetings.

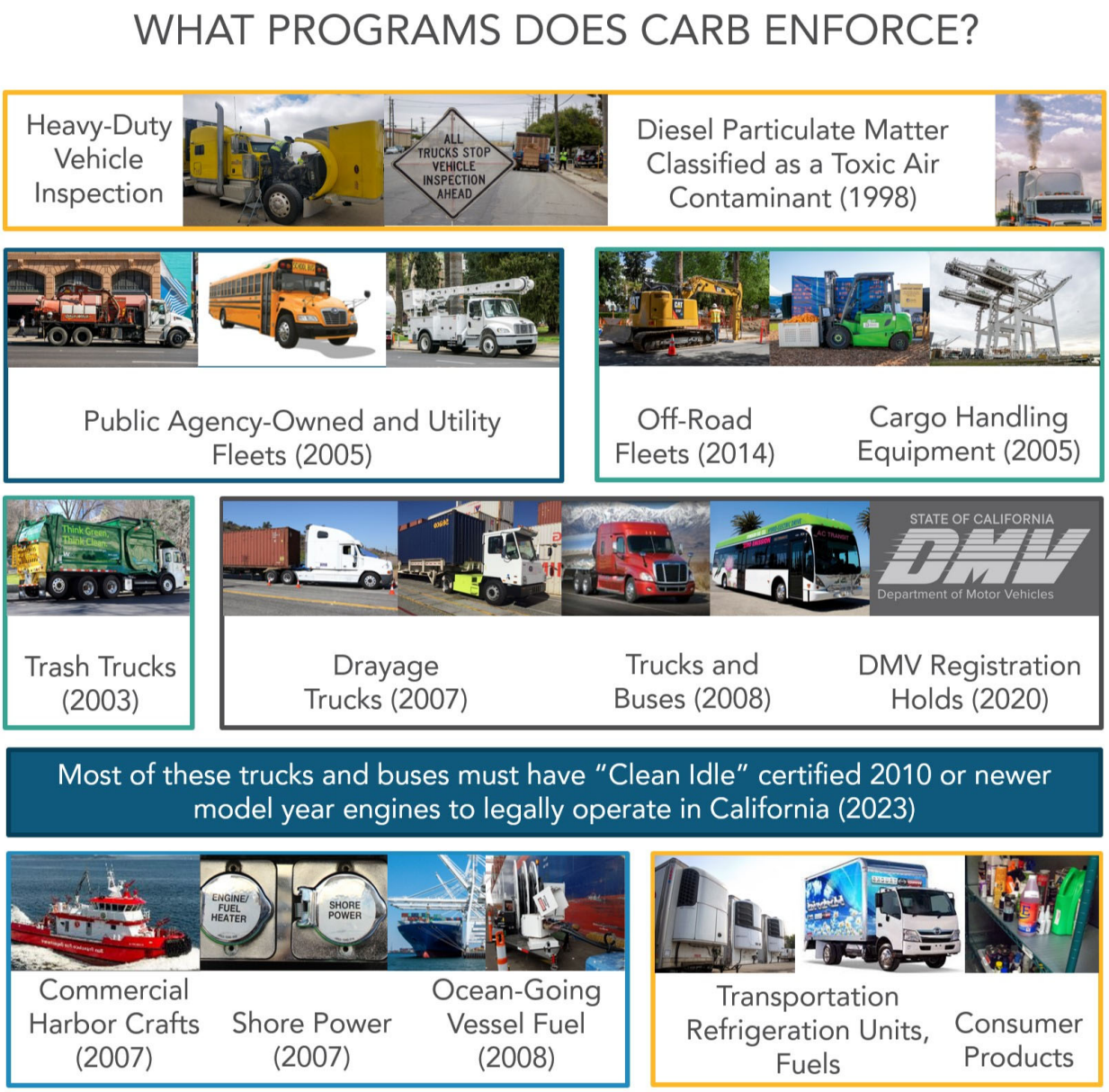
Residents have expressed their concerns about potential sources of environmental pollution. Many are concerned about the adverse health effects from the oil fields (both active and idle wells) and the operation of heavy-duty diesel trucks in their community. There are concerns that California oil and gas operations have been emitting excessive amounts of greenhouse gas (GHG) emissions, resulting in a possible increased risk to nearby communities, and these communities experience negative impacts by the operations.

CARB is responsible for regulating greenhouse gas emission sources from oil and gas facilities. In 2017, CARB adopted the California Oil and Gas Regulation (COGR) to reduce fugitive and vented methane emissions from new and existing oil and gas facilities. The regulation requires owners and operators of oil and gas facilities to regularly conduct leak detection and repair of applicable equipment, repair emission exceedances, keep records of these actions, and report certain information to CARB or local air districts. Local air districts are responsible for regulating criteria pollutant emissions from oil and gas wells. CARB is charged with enforcing its regulations applicable to mobile sources, consumer products, and other area-wide categories, fuels, and climate programs. CARB is also charged with overseeing the implementation of local air district permit and enforcement programs implementing requirements that apply to stationary industrial pollutant sources. In addition, CARB has direct enforcement authority over climate programs, many of which impact stationary sources directly or indirectly.

Diesel Vehicle Enforcement
CARB regulations establish stringent emission requirements that new diesel vehicles must meet. These requirements required engine manufacturers to meet lower particulate matter and NOx emission standards. Many manufacturers included the installation of diesel particulate filters to meet the PM standard, as well as exhaust after treatment to meet the NOx emission standard. These devices remove more than 98 percent of toxic diesel emissions when properly functioning. In addition, because diesel engines and heavy-duty vehicles and equipment are designed to last decades, CARB's diesel fleet regulations require operators to replace older, higher polluting vehicles and equipment with cleaner vehicles, equipment, and technologies to provide emission reductions as quickly as possible. These regulations apply to operators of on-road diesel vehicles such as trucks, and off-road diesel vehicles and equipment including construction and cargo handling equipment, transport refrigeration units, commercial harbor craft, and other sources. As a result of these programs, CARB

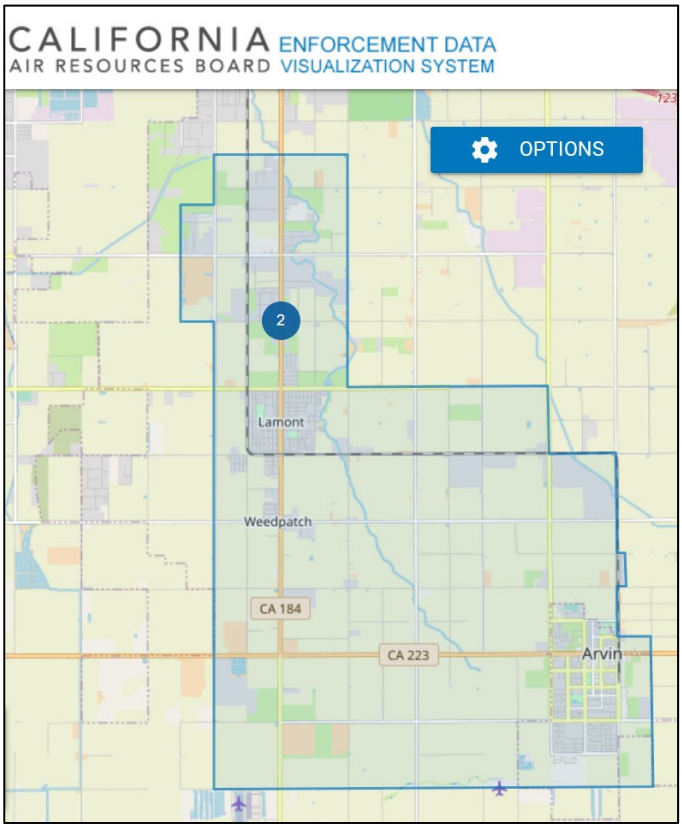
has greatly reduced diesel particulate and NOx emissions by over 90 percent in communities statewide.

Figure 4-11 Programs CARB Enforces



Below is a description of the three-year history of inspections in the community. This information can also be found in CARB's EDVS (Enforcement Data Visualization System – California Air Resources Board). A guide to how to use EDVS is here: Enforcement Data Visualization System (ca.gov). During the three-year period of 2019 through 2021, as illustrated in Figure 4-12 below, CARB conducted two inspections within the boundary for compliance with the Truck and Bus regulation and found both trucks to be compliant.

Figure 4-12 EDVS Image of Enforcement Activity in Arvin/Lamont



Nearly all trucks and buses in California are already, or will be, required to have a certified 2010 or newer model year engines by the end of 2023 to comply with CARB's Truck and Bus rule to legally operate in California.[33] In fact, California is entering its third year where the California Department of Motor Vehicles (DMV) is holding registration for some trucks and buses that are not in compliance with CARB's Truck and Bus rule as a requirement of Senate Bill 1. Due to CARB regulation outreach and enforcement efforts, the compliance rate statewide for the rule was 98 percent in 2020.

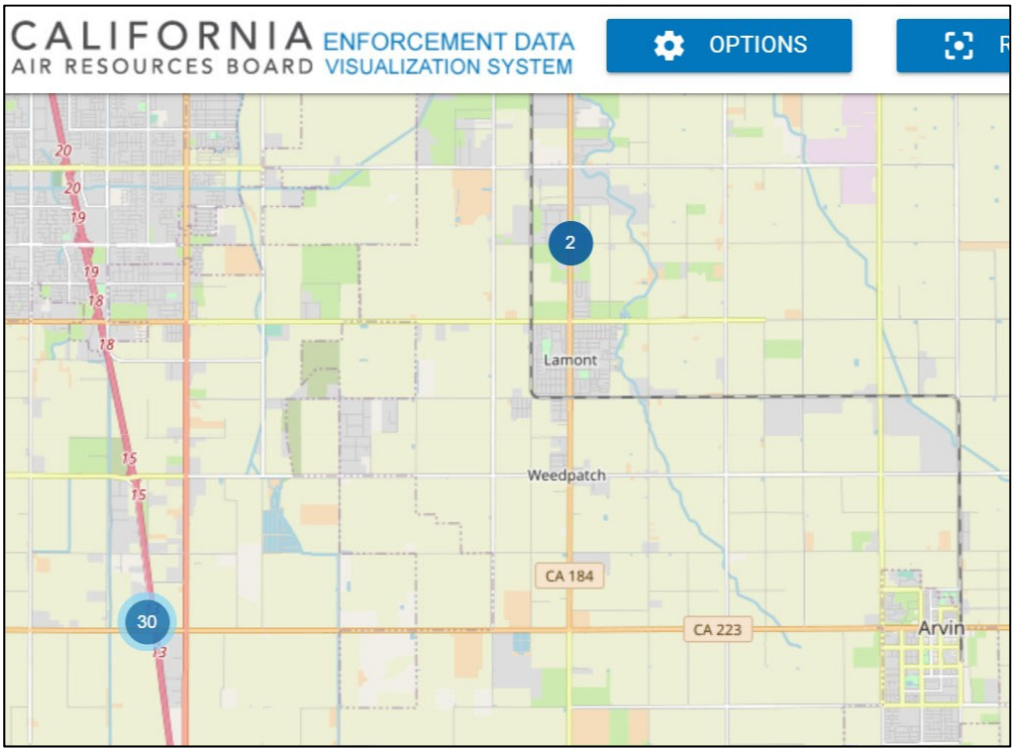
As reported in EDVS, CARB conducted 30 inspections of trucks at two locations right outside of the community border (see Table 4-2, Figure 4-13 below). Out of the 30 inspections, 3 violations were observed. Of those 3, one was an emission related violation. Due to the proximity of the truck stops where the inspections took place to the community boundary, it is anticipated that some of these trucks operated within the community boundary. CARB will work to prioritize inspection locations to ensure that sufficient enforcement is taking place in the community.

[33] CARB, The Truckstop – Truck and Bus Regulation, https://ww2.arb.ca.gov/sites/default/files/truckstop/tb/truckbus.html

Table 4-2 Enforcement near Arvin/Lamont 2019-2021

Program	Inspections	Violations	
		Emissions	Non-Emissions
Heavy-Duty Vehicle Inspection Program (HDVIP)	1	0	1
Idling	28	1	0
Transportation Refrigeration Unit (TRU)	1	0	1
Total	**30**	**1**	**2**

Figure 4-13 EDVS Image of Enforcement Activity near Arvin/Lamont



CARB's idling rules cover commercial vehicles, like trucks and buses, school buses, and off-road equipment. In general, there is a 5-minute idling limit statewide, but the rule allows vehicles and equipment to idle for longer periods under specified conditions, like when trucks are lined up waiting to get into a warehouse. CARB conducted 28 idling inspections near Arvin/Lamont from 2019-2021. One of those vehicles was out of compliance with the idling regulation.
Transportation refrigeration units (TRUs) keep goods cooled (or heated) in cargo containers during transport and are regulated by CARB under the TRU regulation. CARB conducted one inspection of a TRU between 2019 and 2021 near Arvin/Lamont and found one violation for failing to properly label the equipment. This unit was compliant with engine technology and emissions requirements. CARB's TRU rule generally has lower compliance rates, so identifying areas where TRUs operate in Arvin/Lamont will help CARB target inspections to enhance compliance and reduce emissions in the community.

Complaints
CARB received five complaints from the Arvin/Lamont community in the 2017-2021 time period. There are three pathways that CARB Enforcement may follow to address a complaint. One, our staff can take enforcement action based on the complaint which can lead to a notice of violation. Sometimes the investigations can take a long time and other times the complaints are not actionable because CARB has not received enough information to be able to initiate an investigation. Based on the nature of the complaint, we may refer the complaint to another agency that has appropriate jurisdiction. Of the five complaints received in this community, four alleged violations of CARB's Periodic Smoke Inspection Program opacity limits and the fifth alleged truck tampering. Three of these complaints are under investigation and two have resulted in enforcement action being taken.

Truck and Bus
California Department of Motor Vehicles (DMV) began holding registration for trucks and buses that are not in compliance with CARB's Truck and Bus rule in 2020 as a requirement of SB 1. Due to the strength of the Truck and Bus regulation and CARB and DMV's outreach and enforcement efforts, the compliance rate statewide for that rule is 98 percent. In Arvin/Lamont, the compliance rate for this regulation is also 98 percent, based on California DMV registration data. This means that of the 1450 trucks and buses registered in Arvin/Lamont, 1426 were compliant with the Truck and Bus regulation. CARB Enforcement is looking into the non-compliant trucks and ensuring that appropriate action is taken to confirm vehicle compliance.

Oil and Gas
As mentioned earlier, there are community concerns with emissions from oil and gas operations. The California Oil and Gas Regulation (COGR) reduces fugitive and vented methane emissions from new and existing oil and gas facilities. This regulation

is enforced by the SJVAPCD on behalf of CARB. CARB has been attending the IVAN (Identifying Violations Affecting Neighborhoods) Kern meetings. Some of the concerns brought up by community members include: large releases of VOC emissions from small producer sites near residents; toxic plumes from sites that are being prepared for drilling; large yellow/black smokes from the refinery and flaring activities; emissions from oil and gas sites with historical instances of leakage; and improper oil spill disposal. The community has specifically stated that they: want tighter regulations for the oil industry; to amend or change emission exemptions from small producers; to understand emission sources, which includes the location of the wells and pipelines in their community.

CARB is working in collaboration with the community and the San Joaquin Valley Air Pollution Control District to inspect oil and gas facilities in Arvin/Lamont for compliance with local and state regulations and determine if regulations might be strengthened to better protect the community. During the inspections going forward, CARB will look at all sources of pollution located at these facilities, including stationary, portable, and mobile. CARB uses inspection equipment like mobile monitoring, Optical Gas Imaging cameras, Toxic Vapor Analyzers, Infrared Optical Gas Detectors, and Eagle Gas Monitors as well as drones. CARB will document the results of the inspections and summarize what was learned in a report back to the community.

Since May 2021, CARB has inspected Petro Capital Resources Arvin and Termo Arvin oil and gas facilities. CARB staff looks forward to working with the community and other agencies to conducting more inspections in the Arvin/Lamont area and specifically address their oil and gas concerns. For more information on COGR, please visit: Oil and Gas Methane Regulation.

Supplemental Environmental Projects

Enforcement is not a tool to solve all problems but can be a part of the overall efforts to address air quality concerns. CARB has a Supplemental Environmental Project (SEP) policy that allows community-based projects to be funded from a portion of the penalties received during the settlement of enforcement actions. SEPs can improve public health, reduce pollution, increase environmental compliance, and bring awareness to communities most burdened by environmental harm. These projects can range from vegetative barriers to school air filtration projects. Community members have expressed interest in incentive projects that could potentially be funded by SEPs such as urban greening, electric vehicle charging stations, and public fleet vehicles. CARB staff can help community members or organizations identify where SEPs would be more impactful and assist with the submittal of proposals. For more information on SEPs, please visit: Supplemental Environmental Projects (SEP).

Community Enforcement Plan

To increase our presence in the community, CARB commits to partner with the community and the District to work together to develop an enforcement plan for CARB enforcement work. In order to do this, CARB commits to:

- Meeting with the community and conducting tours and listening sessions with their stakeholders
- With the help of the community, developing a timeline of community plan implementation within months of CERP approval.
- Partnering with agencies, as necessary, for the implementation of the community enforcement plan

CARB, in collaboration with community representatives and the District, will issue a community "investigation" report that maps emission sources, highlights community concerns, enforcement results and findings, details the root cause(s) of those community concerns, and develops recommendations to address them. We will conduct community-prioritized enforcement work and then deliver a short and focused community-assessment report describing the results of our work, and recommendations for both further work and future engagement through CARB, CalEPA, and other Boards / Departments as appropriate. These reports will be posted to our website. We will also summarize the lessons learned in our Annual Enforcement Report and engage in a community led process to continue prioritizing projects in a way that will have maximum impact for Arvin/Lamont.

Community Concerns

In addition, CARB enforcement relies on community input for identifying additional locations and sources of concern. Please contact us through the online CalEPA complaint system at: About the Environmental Complaint System | CalEPA, or via phone at: 1 (800) 242-4450 to share your air pollution concerns.

5. METRICS TO TRACK PROGRESS

Strategies implemented as a part of this CERP are designed to improve air quality in the community of Arvin/Lamont. The five-year milestone evaluation is intended, per CARB guidance, to illustrate community scale emissions reductions and air quality trends that may not be evident on an annual reporting basis. To this end, the five-year milestone report submitted to CARB for Arvin/Lamont will include a comprehensive report explaining how air quality data obtained as part of the CAMP and the resulting analyses provided to CSC members helped inform ongoing implementation of CERP strategies and, to the extent possible, how these strategies resulted in lowering emissions in the community.

Additionally, the report will include a complete accounting of all projects, emissions reductions, and associated co-benefits implemented as a result of AB 617 program implementation in the community of Arvin/Lamont.

The tables below illustrate the emissions reduction and project metrics that will be used to report progress made toward meeting the CSC-derived community emissions and exposure reduction goals.

Table 5-1 Target Funding and Emissions Reductions for Incentives Measures

Number	Measure	Unit Type	Units	% of Committee Support	CSC-Recommended Incentive Allocation	Target Reductions Total Lifetime Tons NOx	PM2.5	VOC
	Incentives - Heavy-Duty Trucks & Equipment							
1.A	Heavy-Duty Truck Replacement**	Trucks	25	79%	$5,000,000	96	2	7
1.B	School Bus Replacement*	School Buses	4	81%	$1,600,000	7	0	1
1.C	Ag Equipment Replacement**	Vehicles	50	100%	$4,500,000	187	13	0
1.D	Alternatives to Ag Burning*	Acres	1000	100%	$1,400,000	58	110	100
	Incentives - Residential Benefits							
2.A	Residential Lawn/Garden Equipment*	Mowers	350	97%	$175,000	0.1	0.1	2
2.B	Commercial Lawn/Garden Equipment**	Units	6	59%	$150,000	Emissions Reductions Expected Pending CARB Methodology		
2.C	Residential Vehicle Repair*	Cars	450	61%	$360,000	4	0	0
2.D	Residential Vehicle Replacement*	Cars	200	55%	$4,000,000	1.9	0.1	0
	Incentives - Community Services							
~~3.A~~	~~Car Sharing Program~~	~~Program~~	~~1~~	~~Reassessing CSC support~~	~~$250,000~~	~~Emissions Reductions Expected Pending CARB Methodology~~		
3.B	Urban Greening*	Trees	500	54%	$500,000	Emissions Reductions Expected Pending CARB Methodology		
3.C	Vegetative Barriers*	Trees	500	81%	$500,000	0.25	0.01	0
3.D	Road Improvements, Sidewalks & Bike Paths*	Projects	6	77%	$12,000,000	18.6	10.2	37.8
3.E	Public Fleet Vehicles**	Vehicles	20	~~Reassessing CSC support~~59%	$400,000	0.1	0	0.1
3.F	Incentives for ebikes*	Bikes	TBD with CSC	~~Reassessing CSC support~~55%	No CERP Funding	Emissions Reductions Expected Pending CARB Methodology		
				Total Estimated Emissions Reduction Target (tons)		**372.~~55~~ 5 NOx**	**135.~~46~~ 4 PM2.5**	**148.3~~35~~ VOC**

*New program or incentives greater than existing program
**Enhanced access, priority for current program

Table 5-2 Metrics to Track Regulations, Enforcement, Partnerships, and Outreach Measures

Number	Measure	Metric(s)	Commitment	Communication of Progress to CSC	Report Frequency Timeframe
Regulations and Enforcement					
4.A	Enhanced Inspection Frequency	• Inspections	2 inspections per year for facilities with emissions violations	Facility names Violation Description Inspection Dates	Quarterly 5 years
4.B	Stationary Source Rulemaking	• Regulations	8 rules	Workshop Opportunities Public notices	Monthly Until rulemaking complete
4.C	Expedited AB 2588 Assessment	• Facility Assessments	All facilities within Arvin/Lamont Boundary	Facility names Prioritization Next Steps (as needed)	Monthly 5 years
4.D	Fugitive Dust Enforcement	• Inspections	1 targeted enforcement effort in 2nd and 3rd quarter	Facility names Violation Description Inspection Dates	Quarterly 5 years
4.E	Heavy-Duty Idling Enforcement	• Inspections	1 targeted enforcement effort each quarter	Violation Location Violation Description Inspection Dates	Quarterly 5 years
Agency Partnerships					
5.A	Pesticide Measures	• Monitoring Efforts • Notification Progress	Expanded monitoring, analysis, & notification development	Workshop Opportunities Public notices Monitoring Progress	Monthly 5 years
5.B	Support Land Use Agencies	• Meetings	1 District meeting per quarter with land use agencies	Public Engagement Opportunities Meeting Outcomes	Quarterly 5 years
5.C	Heavy-Duty Truck Rerouting	• Project Progress	Follow ongoing effort to assess truck route alternatives	Public Engagement Opportunities Meeting Outcomes	Quarterly 5 years
5.D	Address Potential Impacts From Idle Oil Wells In Community	• Public Meetings • Community Engagement	District to inform CSC of opportunities to engage with CalGEM to prioritize idle wells	Public Engagement Opportunities Meeting Outcomes	Quarterly 5 years
Outreach					
6.A	Community Awareness and Knowledge of Air Quality	• Community Meetings • Targeted Social Media Ads	4 meetings per year 1 social media campaign per year	Meeting Notices Social Media Campaign Concepts	Quarterly 5 years
6.B	Illegal Burning Outreach	• Community Meetings	4 meetings per year	Meeting Notices	Quarterly 5 years
6.C	HAL Schools Program & Emission Free Zone	• Signs for Schools • HAL Schools Enrollment	Enroll and give signs to all schools in Arvin/Lamont boundary	School Outreach Concepts HAL Schools Feedback	Quarterly 5 years

6. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PROJECT REVIEW

According to Section 15061 (b)(3) of the California Environmental Quality Act (CEQA) Guidelines, a project is exempt from CEQA if, “the activity is covered by the common sense exemption 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.” Since the Project will result in an air quality benefit to the community, the Project is not expected to result in a significant impact under CEQA. As such, the common sense exemption applies.

In addition, this Project is an action taken by a regulatory agency, the San Joaquin Valley Air District, as authorized by state law for the protection and betterment of air quality in the San Joaquin Valley. CEQA Guidelines §15308 provide a categorical exemption for “actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. Construction activities and relaxation of standards allowing environmental degradation are not included in this exemption.” No construction activities or relaxation of standards are included in this project. As such, for this additional reason, the District finds that the Project is exempt from CEQA.

Pursuant to Section 15062 of the CEQA Guidelines, the District will file a Notice of Exemption upon Governing Board approval of the Project.