

Appendix J: List Of Community Concerns For The Path To Clean Air Community Emissions Reduction Plan

This document is a summary of community concerns that have been recorded from Air District public engagement and compliance and enforcement efforts, for use of the Path to Clean Air Community Steering Committee.

Background

The California Air Resources Board Community Air Protection Blueprint underlines, “Most importantly, underpinning AB 617 is the understanding that community members must be active partners in envisioning, developing, and implementing actions to clean up the air in their communities.” The starting point for envisioning, developing, and implementing actions and strategies to reduce emissions and exposure in the Path to Clean Air focus area is identifying priority community concerns.

This document is a compilation of community concerns that have been collected from 2018 through 2021. It is important to acknowledge that just because an individual facility or source has been documented as a community concern that does not confirm it is a problem that will require strategies and actions to achieve air pollution emissions and exposure reductions. These concerns have been identified from the following three efforts:

- The **Community Assets and Air Pollution Mapping Project**, which was an extensive public engagement effort for the current Path to Clean Air Community Steering Committee (CERP CSC) (April 2021 – present), was led by six nonprofit organizations from across the focus area. These nonprofits organized and conducted outreach resulting in over 500 comments from the public regarding local pollution concerns, areas where people gather, and community strengths. Concerns were identified from this list if 5 or more mentions in either the comments or survey responses were received. To learn more, see the results from the mapping project and query individual word searches at this page: <https://rspcerp.mysocialpinpoint.com/ptca-mapping-project#/>.
- The **Community Air Monitoring Plan Community Steering Committee (CAMP CSC)** worked from April 2019 through July 2020 to develop a community air monitoring plan, designed to collect air quality data to provide real-time air quality information to the public and to inform the development of the CERP and other Air District programs. As a part of this work, the CAMP CSC discussed their concerns about sources of air pollution during discussions, small group activities, and mapping exercises. During the mapping activities, the CAMP CSC and other community members added additional air pollution concerns and community assets to maps of the area that showed the locations of large, permitted pollution sources, existing air monitoring stations, and places where people gather, which are near sources of air pollution.

As part of their outreach and engagement efforts, the CAMP CSC also convened a community summit in November 2019 to gather additional information from the public about the community's concerns and to provide updates on ongoing air monitoring. The air pollution concerns provided by the CAMP CSC and the community during these activities and discussions were documented in notes as well as the resulting maps and are summarized in the community concerns sections below. The summaries in this document are from the original notes and maps from these CAMP CSC meetings and community mapping activities. You can read the [2020 Community Air Monitoring Plan](#) to learn more about the community engagement efforts and air pollution concerns identified from that project.

- The Air District responds to and investigates all air quality complaints. Resolving air pollution concerns is one of the Air District's highest priorities. The Air District received 1,171 complaints in the Path to Clean Air area from 2018 – 2020 through the [Air District Air Quality Complaint Program](#) and this document highlights the potential types of concerns in Richmond/San Pablo. Sources of air quality complaints were included in this document if they received over 10 public complaints during this timeframe.

The Community Emission Reduction Plan Community Steering Committee (CERP CSC) Clean Air Affair Town Hall: On March 15th, the Path to Clean Air Community Steering Committee hosted a town hall to hear from all residents – documented or not – about how air pollution has impacted our community. The Town Hall had over 40 local residents participate in the discussions, and the notes from the breakout room listening activities are captured below. You can read the notes from the breakout groups on [these Jamboards](#).

How will this community input be used to form key issues?

The information about air pollution community concerns from these three efforts are summarized in community concerns in this document. For ease of use, these concerns have been grouped into the following six main categories that were major recurring themes:

- Addressing Public Health and Reducing Exposure
- Fuel Refining, Support Facilities, Storage, and Distribution
- Industrial and Commercial Sources Near Communities Odors and Smells
- Odors from Industries
- Vehicles and Trucks, Streets and Freeways, and Logistics
- Marine and Rail

The Air District will work with the CERP CSC to gather information, including community history, modeled data and air pollution measurements, as well as Air District compliance and enforcement data, and other sources of information to further understand these concerns. All this data will be analyzed so there is a common understanding of the causes of air pollution exposure and emissions concerns, the extent and scope of how these concerns impact the health and quality of life for people in the focus area, and viable actions and strategies that can be taken to meaningfully reduce air pollution exposure and protect public health.

This list of community concerns will be used as a foundation for creating a key issues list, which will be the basis of our work to develop strategies and actions to achieve air pollution emissions and

exposure reduction. Below you will read about different community concerns, grouped into six recurring themes.

Community Concern: Addressing Public Health and Reducing Exposure

Health-related words and physical reactions to air pollution were the most commonly recurring theme throughout the Community Assets and Air Pollution Mapping Project. This section also includes concerns about populations that may be more vulnerable to air pollution, and other issues where additional work can be done to prevent exposure.

How was this identified as a community concern?	
Community Assets and Air Pollution Mapping Platform	Community Air Monitoring Plan Steering Committee
<ul style="list-style-type: none"> • 'Health' was mentioned 70 times • 'Asthma' was mentioned 69 times • 'Can't breathe' was mentioned 52 times • 'Lungs' were mentioned 31 times • 'Sick' was mentioned 16 times • 'Respiratory' was mentioned 12 times • 'Cough' was mentioned 10 times • 'Allergy' was mentioned 9 times • 'Inhaler' was mentioned 7 times • 'Headache' was mentioned 5 times • 'Oxygen' was mentioned 5 times • 'Wildfire' was mentioned 10 times. • 'Wood smoke' was mentioned in 8 comments 	<p>Community member exposure during wildfire smoke episodes, during facility incidents, and to poor indoor air quality were identified as concerns during the development of the monitoring plan, as well as poor air quality at outdoor recreational spaces or where students walk or wait for the bus.</p>
Town Hall Breakout Groups	
<ul style="list-style-type: none"> • Concern of losing morning usage of bike path since Marin will be creating a new (3rd) vehicle lane. • Solar panels (affordable) with batteries, hybrid cards, EV, get rid of electrical outages from PG&E • Need more information disseminated about health impacts from pollution (air+water), especially in these communities. info is just being made available • Kids can use technology WELL, so we should get them aware of the tools they can use • Escalation of wildfires - sun never came out, streetlights never went off (a couple of years ago); felt like the world coming to an end • The wildfires were the worst air pollution while living here. the red electrical storms and last year, there was a lot of ash that fell on my yard and plants. • There are a lot of sites that need remediation. There used to be gas stations, or laundromats, or short-term infrastructure and started to get mold and other unhealthy conditions. • Seniors having a lot of respiratory issues. • How many children are suffering from asthma and how many school days are missed from asthma? We could use more health education for communities. • The camp fires from unhoused encampments. • Can we contact women who were pregnant during Richmond fire and see if their children had any health issues? 	

What specific issues has the Air District heard are of concern?

- **Wildfire smoke:** Exposure to wildfire smoke poses a significant risk to public health, especially for children and other groups particularly vulnerable to air pollution. Increased local awareness about the health effects of wildfire smoke is needed, as are resources that provide recommendations for protecting public health. There needs to be more alternatives to assist people in finding ways to help reduce their exposure during wildfire smoke episodes.
- **Residential wood smoke:** Residential wood smoke emissions (PM and organic gases) that comes from people burning wood in their homes and yards can cause negative health effects, especially for people with respiratory issues like asthma. See the Air District's [Impacts of Wood Burning Brochure](#).
- **Indoor Air Quality:** Increased knowledge and information about the impact of poor indoor air quality is needed, including explanations of why older housing and poor ventilation contributes to exposure to harmful pollutants and chemicals.
- **Unhoused people:** Cumulative health impacts of air pollution is of particular concern for unhoused people since there are fewer ways for them to limit their exposure.
- **Sensitive receptors:** It is important to understand the location of where people gather or live who are especially susceptible to air pollution.
- **Incompatible land uses:** There are concerns about the construction of new housing and public spaces near sources of pollution and other incompatible land uses like freeways.
- **Lack of trees and urban vegetation:** Many areas in the focus area, especially in lower income neighborhoods, have few trees and urban vegetation. Trees and urban vegetation when present can reduce local air pollution and urban heat island effects.
- **Lack of bike infrastructure:** People expressed the challenges of safely biking in the city without adequate bike routes and complete streets.
- **Health data and causes of respiratory health issues:** Community members have asked about connections between respiratory issues and air pollution and have requested neighborhood-level data for where there are high rates of asthma

Community Concern: Fuel Refining, Support Facilities, Storage, and Distribution

Community members expressed concern about how neighborhoods across the Path to Clean Air project area are impacted by sources of air pollution from the Chevron refinery sources/operations (including non-stack sources such as tank storage, bioreactor, current or former refinery ponds). This thematic area also includes other related businesses that support the processing, distribution, and storage of fuel and fuel-related products.

How was this identified as a community concern?	
Community Assets and Air Pollution Mapping Platform	Community Air Monitoring Plan Steering Committee
<ul style="list-style-type: none"> • 'Chevron' is mentioned in 84 comments • 'Refinery/refineries' are mentioned 62 times • 'Flare/flaring' are mentioned 24 times, • 'Fire' relating to Chevron is mentioned 9 times 	<p>The facilities associated with fuel or chemical production listed below were all identified as air pollution concerns during the development of the monitoring plan. Of particular concern were the air toxics emissions from these facilities, as well as associated truck traffic along Canal Boulevard.</p>
Air District Complaint (>10 complaints in 3-year period)	Town Hall Breakout Groups
<ul style="list-style-type: none"> • 403 complaints alleged the Chevron refinery between 2018 and 2020. • 64 complaints alleged AAK Oil between 2018 and 2020. • 11 complaints alleged Chemtrade LLC between 2018 and 2020. 	<ul style="list-style-type: none"> • Flaring. Visibly being able to see them. There are times when I'm driving it looks like a house is burning but then I realize it's just flaring. That really pulls on people's fear (flaring was a frequently recurring comment). • I am aware during an acute event like a fire or flaring then when I am outside like running or riding bike - or when I visit other communities and feel the difference in how it is to breath there as opposed to here in Richmond • Smoke coming out of the many refineries in the Richmond community. The smell is sometimes unbearable, and I tend to go inside to avoid it. • Leaks that have happened as well. • Oil leaking in our local beach.

What specific issues has the Air District heard are of concern?

- **Chevron Richmond Refinery:** Chevron is a large petroleum refinery that processes crude oil into fuels and other products, producing emissions of fine particulate matter (PM_{2.5}), air toxics such as benzene, and greenhouse gases such as methane. Sources of concern at Chevron include:
 - Flaring, which may involve visible emissions triggered by equipment malfunctions and/or process upsets and other upset conditions and short-term incidents,
 - Bioreactor ponds, which produce an odor characterized as "tarry" and "hydrocarbon soup"
 - Evaporative emissions from tanks, loading racks, and cooling towers,

- Ocean-going vessel activities at the long wharf (cross-cutting with the Marine and Rail community concern category)
- Contaminated land clean-up sites, which can be a source of PM_{2.5} emissions from soil excavation and hydrocarbon emissions from evaporative processes
- Process heaters, which provide heat to various process streams and are a source of criteria pollutant and air toxic emissions
- The fluidized catalytic cracking unit (FCCU), which is currently the largest PM_{2.5} source at Chevron and is also a source of air toxics like hydrogen sulfide and formaldehyde.
- **Chevron Richmond Technology Center:** This is a petroleum research center. Sources of emissions include gasoline dispensing, tanks, solvent cleaning, and engines.
- **Chemtrade West LLC:** Chemtrade is a large sulfuric acid production facility that supports the Chevron Refinery operations. Its operations result in emissions of PM_{2.5}, sulfuric acid, and carcinogens such as benzene and formaldehyde. The Air District received several complaints about this facility in 2018. An audit of the Continuous Emissions Monitoring System (CEMS) at the facility in March 2021 led to discovery of multiple violations (including ~350 lb/day of underreported SO₂) and a more in-depth investigation of the CEMS. More information regarding the Stipulated Order can be found [here](#).
- **Fuel storage and distribution facilities:** These facilities are a concern because fugitive Volatile Organic Compound (VOCs), many of which are also Toxic Air Contaminants (TACs) can be emitted from inadequately sealed tanks. They are also a concern because of truck traffic associated with fuel storage and distribution. This includes businesses like Plains All American, Richmond Products Terminal (also known as BP West Coast Products LLC, and Kinder Morgan LP), the P66 Terminal, Amtecol, TransMontaigne, IMTT, and AAK Oil.
- **Gas stations:** Gasoline dispensing facilities include publicly accessible gas stations, as well as private fueling operations. Evaporative emissions of VOCs, many of which are toxic compounds, can occur when the facility supply is being topped off, from components of the storage system, or from gasoline pumps used for refueling.

Community Concern: Industrial and Commercial Sources Near Communities

Emissions of air pollutants from some businesses and activities can have a significant exposure impact on the nearby areas, even if they contribute a small percentage of the region's total emissions of that pollutant. This can be especially true for businesses located near where people live or spend time. There are also larger industrial operations that contribute to both local and area-wide impacts, depending on the activity at the facility generating the emissions. Some emissions are not collected by an air pollution control device or emitted from a stack and are referred to as fugitive emissions. Since these emissions occur at ambient temperatures and near the ground, they can have significant near-facility impacts. Common types of fugitive emissions are 1) VOC emissions from evaporation of fuels, solvents, or paints and 2) PM emissions from stockpiles of materials or disturbed surfaces.

How was this identified as a community concern?	
Community Assets and Air Pollution Mapping Platform	Community Air Monitoring Plan Steering Committee
<ul style="list-style-type: none"> • 'Smoke' was mentioned in 60 comments • 'Burn/burning' was mentioned in 16 comments • 'Leak' was mentioned 14 times • 'Dust' was mentioned 5 times 	<p>The sources listed below were identified as concerns during the development of the monitoring plan. Metal scrap and recycling facilities, Levin Terminal, aggregate facilities, auto body shops along 23rd street, construction, and other sources of off-road diesel emissions and fugitive dust were of particular concern, especially sources near where community members live or spend time.</p>
Air District Complaint (>10 complaints in 3-year period)	Town Hall Breakout Groups
<p>13 complaints alleged Kaiser Permanente between 2018 and 2020.</p> <p>There were 11 dust-related complaints and 2 smoke related complaints alleging Gold Bond Building Products, LLC between 2018 and 2020.</p>	<ul style="list-style-type: none"> • Park Blvd near the landfill or the Recycle plant near Jackson - there are small and large industrial activities. I wonder about County oversight. • The landfill is used as a transfer station and can impact the community. • Industrial fires. There was a fire at Simms metal and there was so much released in the air. • Fine black dust that appears in neighborhood (this comment was shared from a few community members) • Rise of sea level (release of pollutants due to change of sea level) and its effect on harmful pollutants that are currently in an area away from the sea • Chemical explosion that happened in North Richmond that harmed many. "Anything could blow at any time".

What specific issues has the Air District heard are of concern?

- **Solid waste and recycling facilities:** These facilities are often unloading, sorting, storing, and hauling solid waste and recycling materials and can be a significant source of PM and diesel truck traffic. West Contra Costa County Landfill and waste transfer station is a particular concern, as well as other waste management and recycling facilities in the area. These operations are cross-cutting among the community concern categories, in that they are also sources of odors (see the Odor community concern for odor-specific concerns).
- **Scrap Metal facilities:** Scrap metal facilities include metal recycling and shredding operations, pick-and-pull dismantling operations, and welding and metal fabricators, which can be a source of fugitive PM and VOC emissions, smoke from fires, and diesel exhaust. Facilities of concern identified during the Community Air Monitoring Plan outreach included Sims Metals and facilities near Brookside Drive in North Richmond.

- **Auto body shops:** Auto body shop operations, such as painting, stripping, and sanding, can release some toxic air pollutants and VOCs. Facilities identified during the Community Air Monitoring Plan outreach included the cluster along 23rd Street in the Iron Triangle neighborhood as a particular concern.
- **Aggregate facilities or materials handling:** Common industrial aggregate activities include crushing, conveying, screening, stockpiling, and hauling of stone, sand, gravel, or other types of rocks. All these activities can generate significant dust that can blow off-site into nearby communities. Facilities of concern include Eagle Rock, Rocks Unlimited, and NorCal Perlite.
- **Cemex Concrete batch plant:** Particulate matter is generated from the concrete production process as well as the diesel emissions of hundreds of trucks and concrete mixers that serve plant operations.
- **Gold Bond Building Products, LLC (formerly National Gypsum Company):** Gold Bond Building Products, LLC (formerly New NGC) is a concern because its stockpiles of gypsum have no covers or enclosures, which results in dust emissions (PM) from stockpiles (potentially) drifting offsite.
- **Levin Terminal:** Levin Terminal's coal handling and transport operations result in both fugitive dust (PM) and diesel particulate emissions, which can impact nearby communities.
- **Restaurants, food trucks:** Restaurants and food trucks cook with large amounts of oils and other organic matter, which is aerosolized and ventilated from the kitchen in the form of exhaust. This exhaust carries the organic aerosol produced in the cooking process into the urban environment. Charbroiling of meats and other foods also results in incomplete combustion. Smoke and vapors generated contain VOC and PM that consist of aldehydes, organic acids, alcohol, nitrogen and sulfur compounds, and polycyclic aromatic hydrocarbons (PAHs).
- **Industrial facilities:** VOCs and PM are also emitted by food processing facilities, such as commercial kitchens, bakeries, wineries, breweries, coffee roasteries. Other types of industrial facilities identified as a concern with VOC emissions included facilities that work with solvents or paints, and businesses that clean truck containers.
- **Backup generators (BUGs):** As of 2022, 142 permitted backup generators, or BUGs, can be found at focus area facilities including factories, offices, data centers, the County landfill, government buildings, hospitals, sewage treatment plants, and other facilities. BUGs are a source of local diesel PM emissions, a toxic air contaminant. Backup generators are tested regularly (up to 50 hours per year) to ensure they work as intended. And the use of BUGs as backup power sources is anticipated to grow as Public Safety Power Shutoffs (PSPSs) become more frequent occurrences. State requirements further limit non-emergency hours of existing BUGs that may utilize less modern engine technologies. Facilities with BUGs of concern include Kaiser Hospital, the West Contra Costa County Landfill, waste transfer facilities, and other waste management/recycling facilities. Wastewater treatment plants have large backup generators that are a source of diesel pollution, such as the West County Wastewater treatment plant, or the East Bay Municipal District wet-weather treatment facility.
- **Dry cleaners:** The main source of toxic air pollutants from dry cleaners is the solvent used in the cleaning process.
- **Construction and heavy diesel equipment:** Diesel PM emissions from construction equipment can be a major contributor to localized air pollution, especially when large construction projects are adjacent to neighborhoods. The Community Air Monitoring Plan

outreach also identified equipment used by Caltrans, especially near the toll area near the Richmond-San Rafael Bridge, as a concern.

- **Contaminated soil from hazardous waste clean-up sites:** These sites must be carefully managed through containment or cleanup to prevent hazardous materials from being made airborne and causing harm to humans, wildlife, or the environment. Local sources of concern include the AstraZeneca cleanup site, DDT (Originally developed as an insecticide, it was banned in 1972 for its environmental impacts) in the Santa Fe Channel from the United Heckathorn cleanup site, and other historically contaminated areas.
- **Dust from construction, demolition, nurseries, and vacant lots:** Construction sites, demolition activities, undeveloped land, and nurseries can be sources of PM when wind or activities loft dust into the air, and it is blown off-site. Wind-blown dust from these sources can contribute to respiratory and other health problems.
- **Track out dust on local roadways:** Mud and dirt can be “tracked out” onto a paved road from a construction site, quarry, landfill or other disturbed surface. This material – referred to as “trackout” – contributes to particulate pollution because vehicle traffic on the paved road will pulverize the mud and dirt into smaller particles (known as silt), and then turbulence from vehicles can entrain the silt into the air where it functions as an air pollutant.

Community Concern: Odors from Industries

Odors from industrial activities are a major concern throughout the different neighborhoods in the Path to Clean Air area. Certain land use types are more likely to result in odor impacts, including wastewater treatment plants; landfill, recycling, and composting facilities; petroleum refineries; chemical plants; and food services. Odors can have a major quality of life and health risk impact. Reactions to odors can range from psychological, to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Learn more about environmental odors and health effects at this Agency for Toxic Substances and Disease Registry [Environmental Odors FAQ page](#).

Odors from industrial activities are a major concern throughout the different neighborhoods in the focus area, which is why the Air District complaint system is a vital reporting tool for addressing odor-related concerns. Humans can detect smells of compounds at very low concentrations, which can be difficult to measure using typically deployed instruments. This thematic area summarizes different odor-related issues that have been collected from the Air District complaint system, as well as outreach and public engagement efforts.

How was this identified as a community concern?	
Community Assets and Air Pollution Mapping Platform	Community Air Monitoring Plan Steering Committee
<ul style="list-style-type: none"> • ‘Smell’ was mentioned 93 times • ‘Gas’ was mentioned 36 times • ‘Chemical smell’ was mentioned 11 times • ‘Fumes’ were mentioned 10 times 	The odors experienced near the sources listed above in addition to unattributed odors near Miller/Knox Regional Shoreline, along the Bay Trail, and the harbor were identified as concerns during the development of the

	monitoring plan. Community members also listed the upcoming cannabis processing facility (Power Plant) as a future concern for odors.
Air District Complaint (>10 complaints in 3-year period)	Town Hall Breakout Groups
<ul style="list-style-type: none"> 192 odor complaints alleged the City of Richmond Wastewater Treatment Plant between 2018 and 2020. 74 odor complaints alleged West Contra Costa County Landfill between 2018 and 2020. 63 odor complaints alleged AAK Oil between 2018 and 2020. 167 complaints alleged unidentified odor issues between 2018 and 2020. 	<ul style="list-style-type: none"> On warm days you can still smell the landfill. North Richmond always had problems with the landfill. Smells from landfill are heightened during the wildfires. Odors certain days of the year and times of day. Sense of odors are desensitized because people get used to the odors.

What specific issues has the Air District heard are of concern?

- **West Contra Costa County Landfill:** Odors from the West Contra Costa County Landfill have been reported from the facility's compost piles, which have been observed to be overheating, and the piles are generating odors. This results in the stockpiles generating strong rancid odors that drift offsite and impacts neighborhoods in the Point Richmond area. The landfill facility is cross-cutting among community concerns, in that it is also a source of localized emissions (i.e. fine particulate matter and VOCs).
- **City of Richmond Wastewater Treatment Plant (operated by Veolia):** This wastewater treatment plan is a concern because of its odors (sewage, hydrogen sulfide, rotten eggs smell), and emissions of hydrogen sulfide and ammonia, which has been a significant source of community air quality complaints.
- **Fuel refining, storage and distribution:** These operations are cross-cutting among community concerns. In addition to the concerns about the facilities described under the Fuel Refining, Support Facilities, Storage, and Distribution community concern category, there are also odors issues. Odors can come from facilities including businesses like Chevron Refinery, Plains All American, Kinder Morgan, P66 Terminal, Amtec, TransMontaigne, and IMTT.
- **AAK Oil:** This is a vegetable oils company that is a specific source of concern with 63 community complaints of rancid-oil odors and observed housekeeping issues.
- **Unidentified:** 167 of the odor complaints from 2018-2020 did not allege a particular source. This is an issue that also appeared frequently in the Community Assets and Air Pollution Mapping project as an issue, as well as with the Community Air Monitoring Plan, including near Miller/Knox Regional Shoreline, the harbor area, and along the Bay Trail.
- **Cannabis growing and processing:** There are concerns about anticipated odors in new areas from a new cannabis processing facility (The Power Plant) currently under construction.

Community Concern: Vehicles and Trucks, Streets and Freeways, and Logistics and Warehouses

The Path to Clean Air project area has many sources of vehicle and truck traffic that impact neighborhoods throughout the focus area via a multitude of mechanisms. Goods movement hubs and logistics centers act as magnet sources that draw in vehicles and require use of heavy-duty diesel equipment, causing mobile source emissions. Travel on I-580 and I-80, busy and congested traffic in neighborhoods and public spaces, and trips to and from warehouses and other truck-related businesses result in significant emissions.

How was this identified as a community concern?		
Community Assets and Air Pollution Mapping Platform	Community Air Monitoring Plan Steering Committee	Town Hall Breakout Groups
<ul style="list-style-type: none"> • 38 comments mentioned 'cars' • 19 comments mentioned 'freeways' • 15 comments mentioned 'traffic' • 14 comments mentioned 'trucks' • 10 comments mentioned 'exhaust' • 10 comments mentioned 'smog' • 10 comments mentioned 'vehicle' • 7 comments mentioned 'congestion' • 6 mentioned 'Parkway' • 6 comments mentioned 'idle/idling' • 5 comments mentioned 'highway' 	<p>The sources of air pollution listed below related to emissions from cars and trucks, from warehouses and other truck-related businesses, and dust from the roadways themselves were identified as concerns during the development of the monitoring plan.</p>	<ul style="list-style-type: none"> • There are multiple massive fulfillment centers and warehouses that are expecting hundreds of vehicles in and out per day. That is a serious threat to health in North Richmond and Richmond (there were a few comments that mentioned warehouses). • Unintended impact of the bypass is that traffic is being rerouted and causing pollution in the area. • Traffic on bridge backup days is pretty bad. • Cut through traffic trying to get around the lights on the Richmond Parkway. • Number of trucks driving through the neighborhood and neighborhood streets. • When traffic is backed up on Fred Jackson Way and I have to walk down that road or ride my bike home my lungs burn. • Finally being able to breathe when far away from major highways

What specific issues has the Air District heard are of concern?

- **Freeways:** Highways with lots of diesel traffic have higher levels of pollution like diesel PM and black carbon, which can increase the risk of heart attacks and stroke and cause hypertension, asthma, chronic obstructive pulmonary disease (COPD), bronchitis and various types of cancer. Neighborhood exposure to emissions from freeways, including housing, schools, and other public spaces like parks is a recurring community across the focus area.
- **Diesel truck traffic and idling:** Diesel trucks idling for extended periods in residential areas or near places where people gather (e.g., gas delivery along Canal, PG&E trucks idling at the intersection of Ohio and Richmond Parkway) can contribute significantly to pollution exposure. Traffic, including start and stop traffic, results in increased local concentrations of vehicle tailpipe emissions such as toxic diesel PM since emissions are typically higher as trucks accelerate.
- **Local traffic and idling on congested surface streets:** Traffic jams and congestion resulting from traffic apps that re-route traffic through residential roads, leading to more vehicle emissions within the neighborhood. One example identified from the Community Assets and Pollution Mapping Project and the Community Monitoring Plan CSC is cars diverting off the Richmond Parkway when it gets backed up during rush hours (3 - 7ish), creating a bottleneck on Fred Jackson Way in North Richmond. Local traffic is also worsened by at grade rail crossings, and near the City of Richmond fleet yard (13th and Greenway) and similar facilities.
- **Warehouses, truck related businesses and goods movement:** Warehouses and truck-related businesses can be a significant source of diesel exhaust from many daily truck trips and create safety issues when they drive through residential areas. Amazon trucks and warehouse, UPS, USPS, FedEx, PG&E, Veolia, and Rubicon were all mentioned as sources of concern.
 - One area of particular concern is the development of the Hilltop Mall site. The new owners of the 77-acre site, Prologis, are a logistics company and in public comments to the City Council, community members have expressed concern that the mall would become a logistics headquarters, adding to the heavy truck traffic. The neighborhood surrounding the mall is largely residential and has a few schools as well. The mall itself is zoned as mixed-use commercial; a logistics center would require re-zoning for industrial use.
- **Exposure to traffic emissions from routes to schools** Students are exposed to diesel PM and other traffic emissions on their routes to schools since they need to walk long distances to get to a bus stop. These routes also have safety issues due to heavy traffic, indicating the need for alternative routes for students and other pedestrians.
- **Transportation sources at bus yards, BART, Amtrak:** Public transportation hubs at bus yards, BART, Amtrak also contribute to diesel and gasoline exhaust emissions in areas where many people spend time.
- **Re-entrained road dust from dirt roads and paved streets:** Paved road dust refers to emissions of PM from dirt, brake and tire wear material, and road surface material that is made airborne as cars and trucks drive on the roadway or as wind resuspends the material. Paved road dust emissions can be higher in areas with dust tracked onto the roadway from facilities, and from traffic on unpaved roads.

Community Concern: Marine and Rail

From massive cargo ships to smaller harbor craft such as ferries and tugboats, marine vessels impact California's air quality, especially in communities near ports. Over the past 10 years, California has enacted regulations to limit the pollution generated from these vessels, helping improve air quality in port-adjacent communities, but this marine activity is still a source of air pollution and local community concern. Locomotive diesel exhaust is made up of particulate matter, smog-forming oxides of nitrogen, sulfur dioxide, greenhouse gases and toxic chemicals. Marine and rail equipment tend to have quite long useful lives, meaning that they can be older and dirtier equipment that is less likely to have been upgraded and replaced despite the existence of more modern technology.

How was this identified as a community concern?		
Community Assets and Air Pollution Mapping Platform	Community Air Monitoring Plan Steering Committee	Town Hall Breakout Groups
<ul style="list-style-type: none"> 28 comments mentioned 'train' 5 comments mentioned 'tugboats' as a concern. 	<p>The marine and rail sources of air pollution listed below were identified as concerns during the development of the monitoring plan.</p>	<ul style="list-style-type: none"> Richmond lives close to the port and gets a lot of particulate exposure. Very visible. Port sources are also a large contributor There is a rail freight line that runs right behind the terra hills mobile manor senior park; according to her research it is an illegally close distance to the residences

What specific issues has the Air District heard are of concern?

Marine

- **Tugboats:** Tugboats operating offshore may have older engines and be a significant source of Diesel PM. Visible smoke emitted from vessels has been noted as a particular concern.
- **Ferries:** Ferries operating offshore and idling at dock produce Diesel PM emissions.
- **Ocean Going Vessels operations:** Ocean-going ships are the major contributors to several air pollutants, nitrogen oxides (NO_x), sulfur dioxide (SO₂), PM, hydrocarbons, carbon monoxide and greenhouse gases. Ocean going vessels dock at the Chevron long wharf and support Levin Terminal, Eagle Rock, auto warehousing companies, and fuel distribution facilities.
- **Other marine diesel sources:** Equipment at port terminals, including barges, dredgers, and cargo handling equipment, which all can generate particulate matter, including diesel PM emissions.

Rail

- **General Rail activities:** Rail in general produces combustion emissions from locomotives, as well as PM from rail grinding and other non-combustion sources. Rail grinding is a maintenance of way vehicle or train used to restore the profile and remove irregularities from worn tracks to extend its life and to improve the ride of trains using the track. They also contribute to trash and other issues along rights-of-way. There are also issues of safety (train alerts) and transparency (e.g., community may want to know what is being transported through neighborhoods).
- **Rail cars transporting coal and petroleum coke:** In addition to the community concerns about coal dust from storage piles and activities at Levin Terminal, community members were concerned about dust falling from rail cars carrying coal or petroleum coke (petcoke) as they transport the material through North Richmond and Richmond. Petroleum coke, also known as petcoke, is a final carbon-rich solid material that is derived from oil refining and is used for fuel.
- **Rail yards:** Rail yards are a source of diesel exhaust from line-haul locomotives, switching locomotives, and cargo handling equipment (e.g., BNSF, BART, Amtrak)
- **Rail switching:** Diesel PM is emitted by the activity of making up and breaking up trains, or directing them onto different tracks, which can take a long time. This activity also can block street traffic, increasing emissions from idling cars and trucks.