December 2023

INTERNATIONAL BORDER COMMUNITIES

SAN YSIDRO & OTAY MESA

Community Emissions Reduction Program

San Diego County
Air Pollution
Control District

Mission

The International Border Community Steering Committee is dedicated to improving air quality and protecting public health in San Ysidro and Otay Mesa through advocacy, education, community engagement, research, and help shape programs, policies, and planning.

Objective

To significantly improve community health outcomes through measurable and meaningful actions towards clean air.

Goals

- **Community Care:** Protect children, elderly, chronically ill, and other groups that are vulnerable to air pollution exposure.
- Passenger Vehicles: Reduce passenger vehicle idling at the Port of Entry and through the community in San Ysidro by improving traffic circulation, and transit and pedestrian infrastructure and options.
- **Heavy-Duty Vehicles:** Reduce emissions and emission exposure from heavy-duty trucks traveling to and from warehouses in Otay Mesa and beyond to protect the health of people living along truck routes (i.e., California State Route 905) on both sides of the border.
- **Other Sources:** Reduce emissions from Border Patrol activity on the west-side of San Ysidro, freight trains going through the heart of San Ysidro, the Brown Field Municipal Airport in Otay Mesa
- and Aeropuerto Abelardo L. Rodriguez in Tijuana, among additional sources.
- **Cross-Border:** Reduce emissions and odor from sources in Tijuana such as sewage in the Tijuana River, burning of trash, and industrial-related activities.

Values

- **Advance Environmental Justice:** Eliminate environmental health and quality of life disparities through the fair treatment and meaningful involvement of all people in environmental health policies, research, and programs, ensuring equitable access to a healthy environment.
- **Improve & Protect Public Health:** Ensure that everyone has the right to attain their highest level of health by addressing historical and contemporary injustices impacting air quality and eliminating preventable health disparities caused by air pollution.
- **Be Good Neighbors:** Actions taken to improve air quality in the San Ysidro and Otay Mesa communities should not negatively harm their neighbors in Tijuana or other communities but should result in mutual improvements in air quality and public health.
- **Commit to Just Economic Outcomes:** Support opportunities for workforce development programs, just wages,[1] and worker's health and safety to support the transition to a cleaner and healthier economy.
- **Seek Opportunities for Collaboration:** Include community members, all appropriate U.S. and Mexican agencies, and all local stakeholders in ongoing collaboration efforts to ensure successful implementation of the Community Emissions Reduction Plan (CERP).
- **Ensure Transparency & Accountability:** Provide updates on CERP strategy implementation and associated monitoring data and use the International Border Steering Committee forum to bring public agencies to the table to ensure transparency and accountability on measures that are within their role and responsibilities to implement.
- **Meaningful Community Engagement:** Ensure that the International Border Steering Committee and community members are able to meaningfully shape policies, plans, programs, and budgets with the goal of improving of air quality in Otay Mesa, San Ysidro, and the broader tri-regional area (United States, Kumeyaay Territory, and Mexico).
- **Measurable Impact:** Strategies implemented should lead to measurable emission reductions and mitigate impacts particularly for those most sensitive to air pollution. Monitoring and data analysis should be informed by community priorities to measure the effectiveness of CERP implementation.

Vision Statement

We imagine an International Border Community in 2035…
…. Where we can be in any neighborhood in San Ysidro and Otay Mesa and breathe clean air;
…. Where the movement of goods occurs in a healthy and safe manner with a more sustainable truck fleet and technologies that reduce air pollution and improve cross-border efficiencies;
…. Where there are abundant transit options and biking and walking infrastructure is prioritized on both sides of the border so that we are less dependent on cars;
…. Where most people do not cross the border by car but cross both ways either on foot or transit in 20 minutes or less;
…. Where there is collaboration on the implementation of strategies with communities and governmental agencies on both sides of the border;
…. Where there is abundant green space with trees lining key walking corridors and separating schools, parks, community centers, and clinics from air pollution sources and in places where trees can't be planted, other innovations are used such as "City Trees" that can clean the air;
…. Where the reliance on cars is reduced because everyone is within walking distance of important amenities such as, healthy foods, parks, schools, transit hubs, and medical facilities;
…. Where the flow of car traffic is redirected away from schools, homes, and parks;
…. Where there is fast and efficient regional transit connection with a Purple Line Trolley and Express Blue Line Trolley;
…. Where the Tijuana River Valley is a healthy place for plant life, animals, and humans, where the quality of life for westside San Ysidro residents improves through clean smelling air and where water quality is at healthy levels at South Bay beaches, and we can safely access the water;
…. Where air purifiers are in every home with sensitive populations and in schools, community centers, and health clinics;
…. Where industry practices and impacts in San Ysidro and Otay Mesa are the same as in the most affluent communities in the region;
…. Where San Ysidro and Otay Mesa are no longer in the CalEnviroScreen top 25 percentile of communities in the state facing environmental injustices.

We Imagine 2035.

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About the Community Air Protection Program (CAPP) and Community Emissions Reduction Program (CERP)[2]

"AB 617 was signed into law by Governor Edmund G. Brown Jr. in 2017. To translate AB 617 into action, CARB established the Community Air Protection Program. The Program is administered by CARB's Office of Community Air Protection (OCAP) and implemented by CARB and air districts. AB 617 requires CARB to develop a Statewide Strategy to reduce emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden (overburdened communities) to these forms of air pollution and to update that strategy every five years. One component of AB 617 requires CARB and air districts to develop and implement additional activities including emissions reporting, monitoring, and plans to reduce exposures and emissions in the communities that are the most impacted by poor air quality—known as Community Emission Reduction Programs (CERP). In addition to consulting other government agencies, affected industry, and sources, the law requires CARB to consult environmental justice groups and other interested stakeholders and requires air districts to consult individuals and community-based organizations so that overburdened communities have a say in how CARB and air districts carry out plans to improve air quality. The Program is centered on community-informed local emissions and exposure reduction actions that are implemented equitably by local, regional, and state agencies. AB 617 also includes requirements to help advance air pollution control efforts throughout the State for accelerated updates (retrofit) of air pollution controls on industrial sources, higher civil enforcement penalties, and greater transparency and availability of air quality and emissions data and pollution control technology options."

California Air Resources Board, Community Air Protection Program, Blueprint 2.0, September 2023

Photo Source: San Ysidro Health Center

CHAPTER 1: BACKGROUND

In 2018, SDAPCD submitted a nomination for the Border Communities, and they were selected to participate in the Community Air Protection Program (CAPP) in February 2022. The Border Communities have been selected because the area has the highest percentile of vehicle traffic in the State and its PM2.5 levels are in the 95+ percentile. According to the CalEnviroScreen, San Ysidro is categorized as a "disadvantaged community." [3] SDAPCD is concerned that current monitoring may not provide a complete picture of the PM2.5 levels and diesel particulate in the community. Thus, more community monitoring is needed to ensure the air quality data fully represents the exposure burden of the community.

There are two key components of the Community Air Protection Program (CAPP): Community Air Monitoring Plan (CAMP) and Community Emission Reduction Program (CERP). The CAMP was co-developed by the International Border Community Steering Committee (IBCSC) and completed in the Spring of 2023. Community air monitoring conducted as part of AB 617 plays a key role in supporting actions to understand current air quality, reduce emissions and exposure to air pollution within heavily burdened communities, and measure the success of the community emissions reduction programs over time. As part of the CAMP, the IBCSC and participating community members identified key locations to place monitors in the community, based upon pollution sources identified and their proximity to sensitive populations. SDAPCD's monitoring staff will finalize locations and monitoring equipment needed based upon the following considerations:

- Community input: key areas the community has identified as sites of concern due to proximity of sensitive populations and/or pollution sources.
- Suitability: electrical power and/or network availability; no barriers or obstructions impacting the air monitor's ability to collect data; land availability for placement of monitors and security.
- Available resources: SDAPCD staff to deploy, maintain, and collect and analyze data; available air monitoring equipment.

Pollutants that will be monitored as part of the CAMP's implementation include particulate matter, diesel particulate matter, volatile organic compounds, airborne metals, and odor-causing air pollution. See the table below for examples of sources and a list of potential health impacts for each pollutant.

Table 1: Pollutants, Sources, and Impacts

Pollutant	Examples of Local Sources	Potential Health Impacts
Particulate Matter	Fires, Construction, Off-road Vehicles, Road Dust, etc.	Asthma, Lung Cancer, Lung Disease, Cancer Heart Disease, Dementia, etc.
Diesel Particulate Matter	Trucks, Trains, Buses, Generators, etc.	Asthma, Lung Cancer, Lung Disease, Bladder Cancer, Heart Disease, Irritation and inflammation of eyes, nose, and throat, Respiratory allergies, etc.
Volatile Organic Compounds	Liquids used to dissolve other substances (solvents), Industrial Activity, Automobile Engines, Electricity Generation, etc.	Asthma, Cancer, Irritation and inflammation of eyes, nose, and throat, Headaches and dizziness, Nausea, Liver, kidney, central nervous system damage, etc.
Airborne Metals	Industrial Activity, Roadside dust; tire wear; break wear, Automobile Engines, Scrapyards, etc.	Lung Cancer, Cancer, Heart Disease, etc.
Odor-causing Air Pollution	Wastewater, Livestock, Trash Heaps, Industrial Operations, etc.	Headache, nausea, dizziness, mental health (i.e., depression), Irritated throat, Watery eyes, and Nose irritation, etc.

While the CAMP focuses on monitoring air quality, the Community Emissions Reduction Program (CERP), is a document that sets community goals to reduce air pollution emissions and identifies strategies to help achieve emission reduction goals. Much of the same information is provided in each document, and though the two plans are highly interrelated, they differ in one key area: while the CAMP specifies how and where pollution data will be gathered and disseminated, the CERP identifies strategies that can reduce pollution levels at the source of emissions.

The International Border Communities CERP will include the following sections:

- Description of public outreach conducted to inform the development of the CERP;
- Profile of the International Border Communities and community-identified priorities;
- Technical foundation with baseline air monitoring data and emissions inventory;
- Goals, strategies, actions, metrics and timeline to address community identified air pollution priorities; and
- Enforcement plan.

PUBLIC OUTREACH AND ENGAGEMENT

The development of a CERP requires a community-led process. One of the ways in which SDAPCD has ensured a community-led process is through the development of a Community Steering Committee. The International Border Steering Committee (IBCSC) has been meeting monthly since April 2022 and serves as a liaison between SDAPCD, CARB, and the community. IBCSC is a diverse steering committee consisting of residents, businesses, workers, non-profit organizations, public agencies, medical experts, and academia. Most of the committee members are residents of the Border Communities. IBCSC is guided by a charter that was approved by the committee. This Charter describes the Steering Committee for the International Border Communities in San Diego, including its composition (membership), how meetings will be conducted and how information will be made available to its members and the public. IBCSC provides the direction of meetings. SDAPCD plays a supporting role by preparing agendas, meeting notes, and presentations in advance of meetings, bringing experts to present on agenda items, and providing the committee with updates and information about upcoming workshops related to AB 617. IBCSC is open to the public and meets virtually once per month and in-person once per quarter in San Ysidro and Otay Mesa. Meetings are held in the evenings when most people have indicated they are available to attend. SDAPCD provides Spanish interpretation at meetings and translates all documents into Spanish. This has also allowed for participation from residents in San Ysidro, Otay Mesa, and Tijuana who have an interest in environmental justice. Only those who qualify under the Charter and have applied are official voting CSC members. SDAPCD relies on IBCSC to increase its understanding of the community, identify community needs and concerns, inform the selection of potential air monitoring site locations, and connect with relevant community and agency contacts. The IBCSC has been crucial for CERP co-development and will be an important partner in CERP implementation. The IBCSC will serve an important role in distributing the


IBCSC Meeting

most up-to-date information to members of the community. The IBCSC also holds SDAPCD accountable to successfully implementing and achieving CERP strategies and goals. SDAPCD seeks committee approval on items such as what pollutants to measure, where to put air monitoring sites, and how to spend incentive funding.

SDAPCD also maintains a website with IBCSC information and updates. To facilitate information sharing and dissemination of AB 617-related information, the SDAPCD created the AB 617 web page at: Community Air Protection Program Web page. This web page is the best place to find current information regarding this program and the Community Air Protection Program efforts within San Diego County. Specific web pages and sources of current information are referenced in this document, as appropriate.

Lastly, SDAPCD reports regularly and shares information with the San Diego-Tijuana Air Quality Task Force, which is a group of U.S. and Mexican public entities and stakeholders co-chaired by SDAPCD and the State of Baja California (Secretaria de Medio Ambiente y Desarrollo Sustentable).

IBCSC Meeting

SAN YSIDRO DEMOGRAPHIC INFORMATION (ZIP CODE 92173)

88.8%
Language Other Than English Spoken at Home

46.1%
Foreign Born population

10.7%
65 Years and Older

26.9%
Under 18 years old

$54,003
Estimate for Median Household Income

17.9%
Poverty Rate

10.5%
Bachelor's Degree or Higher

13.3%
Without Health Care Coverage

OTAY MESA DEMOGRAPHIC INFORMATION (ZIP CODE 92154)

66.5%
Language Other Than English Spoken at Home

32.3%
Foreign Born population

12.9%
65 Years and Older

-
Under 18 years old

$74,705
Estimate for Median Household Income

11.0%
Poverty Rate

18.0%
Bachelor's Degree or Higher

9.3%
Without Health Care Coverage

Photo Source: San Ysidro Health Center

CHAPTER 2: PROFILE OF THE INTERNATIONAL BORDER COMMUNITIES

Adjacent to Tijuana Mexico and located on unceded Kumeyaay territory, San Ysidro and Otay Mesa are vibrant and culturally rich Tri-National communities with art, music, food, commerce, and people flowing back and forth across the border. But due to planning and infrastructure that has favored passenger vehicles and unsustainable commerce activities, this cross-border exchange comes at a cost to the environmental health of the communities on both sides of the border. San Ysidro has been identified as a "disadvantaged" community under SB 535 with census tracts having an overall CalEnviroScreen (CES) score in 66-83 percentile higher than other California communities that are disproportionately burdened by multiple sources of pollution. Of note, CES 4.0 also calculated the PM2.5 burden at 95% and the traffic burden was calculated at 100% higher than other census tracts in California. SDAPCD is concerned that current monitoring may not provide a complete picture of the PM2.5 levels and diesel particulate in the community. More community monitoring is needed to ensure the air quality data fully represents the exposure burden of the community.

There are very significant socioeconomic indicators (i.e., such as poverty rate, access to healthcare, monolingual speakers either than English, etc.) that inhibit San Ysidro residents from overcoming the pollution exposure and environmental effects. Thus, with significant poverty levels and having much of their limited income going towards housing, their ability to protect themselves from pollution exposure and prevent its health impacts is greatly limited. The tables below are a high-level demographic information for both San Ysidro and Otay Mesa.[4]

COMMUNITY-IDENTIFIED PRIORITIES (TARGETS)

An integral part of the CERP development process is the co-development of a community profile by the Community Steering Committee and participating community members. The profile is based upon community-identified air quality priorities. These community-identified priorities then become the targets that the strategies in the CERP will address. The community-identified priorities mostly focus on mobile sources of air pollution. This is understandable due to the relatively small number and particular types of stationary sources located in the San Ysidro and Otay Mesa communities. The following table provides a high-level description of the community-identified priorities that will be discussed in greater detail in the next section.

Table 2: Community-Identified Priorities

Community Care	• Actions that protect children, elderly, chronically ill, and other groups that are vulnerable to air pollution.
Passenger Vehicles	• Idling cars at the ports of entry. • Traffic circulation near or around Las Americas Premium Outlets, Dairy Mart Rd., Calle Primera, Willow Rd., Camino De La Plaza, East San Ysidro Blvd., and more.
Heavy-Duty Trucks	• Idling heavy duty trucks at the port of entry. • Operations at warehouses, including current and proposed expansions. • Current and future impacts to people living in new housing developments near freeways and warehouses, especially along California State Route 905.
Other Mobile Sources	• Dust and exhaust from Border Patrol ATVs and vehicles operating on the west side of San Ysidro. Emissions from freight trains going through the heart of San Ysidro. • Pollution from both Brown Field Municipal Airport in Otay Mesa and Aeropuerto Abelardo L. Rodriguez in Tijuana.
Cross-Border	• Odor from the Tijuana River caused by untreated sewage flowing from Tijuana. • Trash and other items being burned in Tijuana. • Industrial-related emissions coming from Tijuana.

Community Care

IBCSC and participating community members voiced concerns about the impacts of air pollution, particularly to sensitive populations such as children and elderly people. IBCSC requested that air quality monitors be placed at or near schools, parks, health centers, and senior centers. Additionally, strategies should be developed and implemented to specifically protect children, elderly, chronically ill, and other groups that are vulnerable to air pollution.

Health conditions such as asthma, heart disease, and cancer are connected to air pollution. In the heart of San Ysidro where many of these parks, schools, health centers, and senior centers are located, according to CalEnviroScreen 4.0 indicators map, the asthma rate in this area is higher than 68-78% of the census tracts in California and cardiovascular disease rate is higher than 68-80% of the census tracts in California.[5] According to the EPA's EJScreen, San Ysidro and Otay Mesa "Air Toxics Cancer Risk," a lifetime cancer risk from inhalation of air toxics, are in the higher than 95-100% of other communities nationwide.[6] These indicators highlight the need to ensure that all is done not only to reduce emissions in the long-term but protect public health in the near-term.

Passenger Vehicles

Idling cars at the ports of entry (waiting to enter Mexico and the United States) and the associated traffic circulation issues they cause within San Ysidro is one of the highest air quality concerns identified by the IBCSC and participating community members. Particularly, the traffic circulation and its impact on air quality near Las Americas Premium Outlets, Dairy Mart Rd., Calle Primera, Willow Rd., Camino De La Plaza, and East San Ysidro Blvd., have been noted as key transportation problem areas. These streets have been noted as areas of great concern due to their proximity to homes and gathering spaces for sensitive populations, including Willow Elementary, Larsen Field, Cesar Chavez Recreation Center, and the Ramon Parra Library.

San Ysidro and Otay Mesa contain the largest and second-largest land border crossings in the Western Hemisphere, respectively, and both communities rank in the 100th percentile for traffic burden in the state of California. Hundreds of thousands of people use these crossings every day to travel between the United States and Mexico, resulting in long lines of idling passenger vehicles and heavy-duty trucks. These vehicles release chemicals into the air that become pollution, negatively affecting the air quality in San Ysidro, Otay Mesa, and the greater Tijuana area. The best available data also substantiates the concerns raised by the IBCSC and community members. These impacts are directly linked to generations of intentional regional planning decisions. In 1954, Interstate 5 was constructed, establishing a major

route to the border, and bisecting the San Ysidro community. In the 1970s, Interstates 805 and 905 were constructed, adding an additional physical division within the community of San Ysidro and limiting the pedestrian mobility of San Ysidro residents and travelers.

The environmental context of the community of San Ysidro is best understood based on its proximity to the U.S.-Mexico International Border. San Ysidro is located immediately adjacent to the busiest land Port-of-Entry (POE) in the Western Hemisphere, the San Ysidro POE. For example, according to the Bureau of Transportation Statistics (BTS) Border Crossing Data inbound crossings at the San Ysidro Port of Entry for the month of June 2023 included:

- 25,367 bus passengers;
- 615,232 pedestrians; and
- 1,352,353 Personal Vehicles with 2,177,654 personal vehicle passengers.[7]

Vehicular queuing to cross this POE extends to beyond 5 miles on local freeways during busy traffic hours. POE Operations reports that 6 out of 10 persons entering and exiting through any port of the United States happens through the San Ysidro POE. This accounts for disproportionate impacts and exposure of the San Ysidro community to vehicle emissions from border traffic. Further, port reconfiguration and expansion are underway to accommodate a projected 87% increase in traffic by the year 2030 (US General Services Administration, 2017). Changes at the port are likely to have a substantial impact on the air quality in the surrounding South San Diego communities. SDAPCD has limited regulatory authority over mobile source but will be working closely with government agency partners (i.e., SANDAG, CARB, CalTrans, etc.) to implement strategies.

Figure 1 CalEnviroScreen 4.0 map displaying traffic impact by census tract in the IBC. The traffic densities in both Otay Mesa and San Ysidro rank in the 100th percentile for California.

Heavy-Duty Trucks

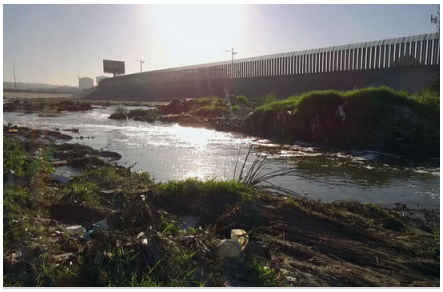
Addressing idling heavy-duty trucks, their operations in Otay Mesa, and proposed expansion of warehouses is of great priority for the IBCSC and community members. There are approximately 302 warehouses in the International Border Communities with the majority located in Otay Mesa. These warehouses attract thousands of heavy-duty trucks crossing the border to drop off goods that are then shipped across the United States. In 2021, more than 1 million cargo trucks importing more than $37 billion of goods crossed into Otay Mesa, which is considered California's busiest commercial truck crossing.[8] Most recently, according to the Bureau of Transportation Statistics (BTS) Border Crossing Data summary statistics for inbound truck crossing in Otay Mesa, 91,829 trucks were processed in the month of May 2023.[9]

These heavy-duty trucks idle as they are in a queue waiting to cross the border into Otay Mesa and be inspected at the California Highway Patrol Commercial Vehicle Enforcement Facility. Many heavy-duty trucks then head to warehouses located in Otay Mesa, unload cargo, and then head back to Mexico to repeat the process. These warehouses are the primary facilities attracting heavy-duty vehicles and there are plans for more warehouse expansion and development. With the growing warehouse footprint and increase of heavy-duty vehicles operations, IBCSC and the community are concerned about the current and future impacts to people living in new housing developments near freeways and warehouses, especially along on California State Route 905. IBCSC sees that the increase of heavy-duty trucks and warehouses, coupled with poor land use planning that is allowing for the development of housing along the 905 corridor, will ultimately increase air pollution exposure and put people's health at risk.

There is a precedent for SDAPCD implementing regulations for heavy-duty vehicles in the region. Even though SDAPCD's regulatory authority is for stationary sources, SDAPCD signed a Memorandum of Understanding (MOU) with the California Air Resources Board (CARB) in 2014 allowing enforcement of certain mobile source regulations, which includes In-Use On-Road Heavy-Duty Diesel Vehicles Regulation (a statewide truck and bus regulation). These rules focus on reducing diesel exhaust emissions and the public's exposure to toxic diesel pollutants, which are known carcinogens that adversely impact public health. Enforcing mobile source regulations is critical to reducing air pollutant emissions from those sources in San Diego County. SDAPCD has been working to address this issue by undertaking substantial public outreach, closely working with stakeholders, and doing inspections of vehicles to verify compliance with On-Road air quality regulations. Inspections are currently being done at the Otay Mesa Border crossing areas. Collaborating at the local level to implement these State regulations will make the process more efficient and will allow SDAPCD staff to closely work with operators as they correct deficiencies.

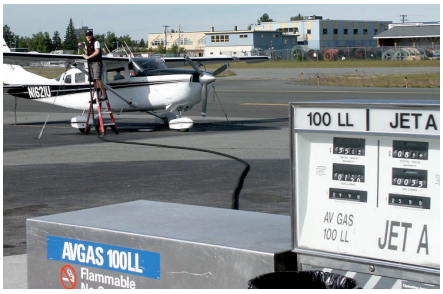
Cross-Border

In addition to the San Diego International Border being the busiest Port of Entry in the Western Hemisphere, the San Diego International Border Community shares a binational air and watershed with Tijuana, Mexico. When San Ysidro and Otay Mesa are downwind of Tijuana, the PM2.5 Monitoring at the San Ysidro Port-of-Entry Study showed elevated particulate levels in the community.[10] For example, smoke and toxins from open burning of trash in Tijuana migrates north on moderately windy days.



In addition to open burning, air pollution from industrial operations in Tijuana has been an issue impacting people on both sides of the border since the early 1980s and has intensified due to United States trade policies that have incentivized industrial growth over the past few decades. As of 2022, there are roughly 270,000 maquiladora employees (nearly equivalent to the city of Chula Vista's population, which is one of the most populated cities in San Diego County) in Tijuana; these maquiladoras account for 70 million square feet of industrial space.[11] Maquiladoras in Tijuana are industrial facilities that manufacture a variety of consumer and industry products including automotive, electronics, industrial, aerospace, and medical devices. This also includes an emerging market of warehouses that serve as distribution centers that provides shipping services to e-commerce companies.

For community members who live on the west-side of San Ysidro, the odor from the Tijuana River coming from untreated sewage in Tijuana, is sometimes unbearable and has drastically impacted their quality of life. Residents have complained about feeling ill and suffering from headaches due to being exposed to noxious odors. This is particularly a problem when it rains because millions of gallons of raw sewage from Mexico flow into the Tijuana River, causing it to overflow in the Tijuana River Estuary and onto local beaches. The odor and water pollution problem has gotten so bad due to years of lack of investment to fix the problem that in July 2023 the San Diego County supervisors voted to push for a federal emergency declaration on Tijuana River pollution.[12]

Other Sources

In addition to emissions from passenger vehicles and heavy-duty vehicles, reducing emissions from freight trains, airplanes, and off-road vehicles are also top air quality priorities for the IBCSC and the community. There is a rail line that is shared by MTS for the trolley and by commercial trains going to and from the border in the late night/early mornings. The rail line goes right through the heart of San Ysidro where it is dense with housing, thus exposing the community to emissions from freight train operations. Additionally, another source of air pollution is from dust and exhaust from Border Patrol ATVs and vehicles patrolling along the border fence. Dust clouds migrating towards homes from these operations are impacting the health and quality of life for those who live in the west-side of San Ysidro. Lastly, another source of air pollution is from airport operations on both sides of the border-- Brown Field Municipal Airport in Otay Mesa and Aeropuerto Abelardo L. Rodriguez in Tijuana. Concerns regarding emissions from burning fuels adds to the cumulative impact of people living near these airports, particularly people residing in Otay Mesa.

Air Pollution Impacts

Particulate Patter (PM) is air pollution made up of solid and liquid particles small and light enough to remain airborne for days to weeks. While some PM is visible to humans, much of this class of pollution can only be viewed with powerful electron microscopes. PM can be emitted from sources such as construction, off-road vehicle activity, fires, and more, or produced from complex chemical reactions between gases in the atmosphere. PM2.5 is small enough to penetrate deep into lung tissue and even the bloodstream, which can result in serious health problems including cancer (diesel particulate matter). Beyond health impacts, PM is a leading cause of haze, which reduces visibility.

Reactive Organic Gases (ROGs), also known as Volatile Organic Compounds (VOCs), are a broad class of chemicals characterized by their tendency to release vapors from a solid or liquid state. Vapors can be released from liquids used to dissolve other substances (solvents), industrial activity, fuel combustion from automobile engines or electricity generation, and more. Each VOC varies from the next in terms of hazard, toxicity, health effects, etc. Generally, VOCs are associated with the following health effects: irritation and inflammation of eyes, nose, and throat; headaches and dizziness; nausea; exacerbation of existing respiratory health problems, such as asthma; cancer; liver, kidney, and central nervous system damage; etc. Besides direct health impacts, VOCs also contribute to the formation of ozone, which, like PM, is an EPA criteria pollutant. Ozone inflames and damages lungs and airways, exacerbates asthma and other respiratory illnesses, and causes coughing and sore throat.

Diesel particulate matter (DPM), a subset of PM, is a byproduct of incomplete fossil fuel combustion found in the exhaust from trucks, buses, trains, and other diesel-powered equipment. DPM contains hundreds of distinct chemicals, many of which have the potential to cause cancer (carcinogenic), such as benzene and naphthalene. Like PM, DPM can be small enough to penetrate deep into lung tissue and enter the bloodstream and contribute to a range of health problems: irritation and inflammation of eyes, nose, and throat; heart disease; bladder and lung cancer; lung disease (i.e., COPD); asthma; respiratory allergies; etc. Beyond direct health impacts, DPM can also substantially reduce visibility and contribute to climate change.

NOx are gases that contribute to the formation of smog and acid rain, as well as affecting ozone. NOx gases are usually produced from the reaction between nitrogen and oxygen during combustion of fuels, in air; especially at high temperatures, such as in car engines. In areas of high motor vehicle traffic, the nitrogen oxides emitted can be a significant source of air pollution. Nitrogen dioxide causes a range of harmful effects on the lungs, including: increased inflammation of the airways; worsened cough and wheezing; reduced lung function; increased asthma attacks; and greater likelihood of emergency department and hospital admissions. Also, elevated levels of NO2 were strongly associated with heart and lung harm, affected pregnancy and birth outcomes, and were likely associated with increased risk of kidney and neurological harm, autoimmune disorders and cancer (Nitrogen Dioxide | American Lung Association).

Photo Source: San Diego Union Tribune

CHAPTER 3: TECHNICAL ASSESSMENT

EMISSIONS INVENTORY DATA

This section will discuss the main contributors to emissions (air pollution) and outline the base year (today's available data measuring air pollution) and future year emissions inventories for the International Border Communities of San Ysidro and Otay Mesa. An emissions inventory is a systematic listing of the sources of air pollution, and the type and amount of pollutant emission estimates by source, for a specific geographic area during a given time period. Emissions inventories are one of the fundamental building blocks in the development of air quality plans (e.g., State Implementation Plan, CERP), and serve critical functions such as:

- identify pollutants of concern and their sources;
- determine the amount of emissions, distribution, trends;
- input to air quality modeling and health risk assessments for determining air pollutant concentrations and health impacts;
- help identify and prioritize control strategies; and
- help track progress in meeting emission reduction commitments.

SDAPCD and CARB jointly developed the community level emissions inventories using reported emissions data for permitted facilities, and best available methodologies and models for areawide (e.g., gas stations, fugitive dust, outdoor cooking) and mobile (e.g., cars, heavy-duty trucks, off-road equipment) sources that are within this community. The emissions inventory includes estimated emissions for criteria air pollutants[13] (e.g., nitrogen oxides, particulate matter) and their precursors (e.g., reactive organic gases (ROG)[14], ammonia), and toxic air contaminants (e.g., diesel PM). It is important to understand that emissions inventories are developed with the best available data, and that the development process is continuous, iterative, and always in a state of improvement as science advances and more robust input data become available. There is an inherent uncertainty and limitation in emission inventories, whether they are based on self-reported emissions from facilities or from estimates calculated using methodologies and models.
Inventory Years Used in the CERP

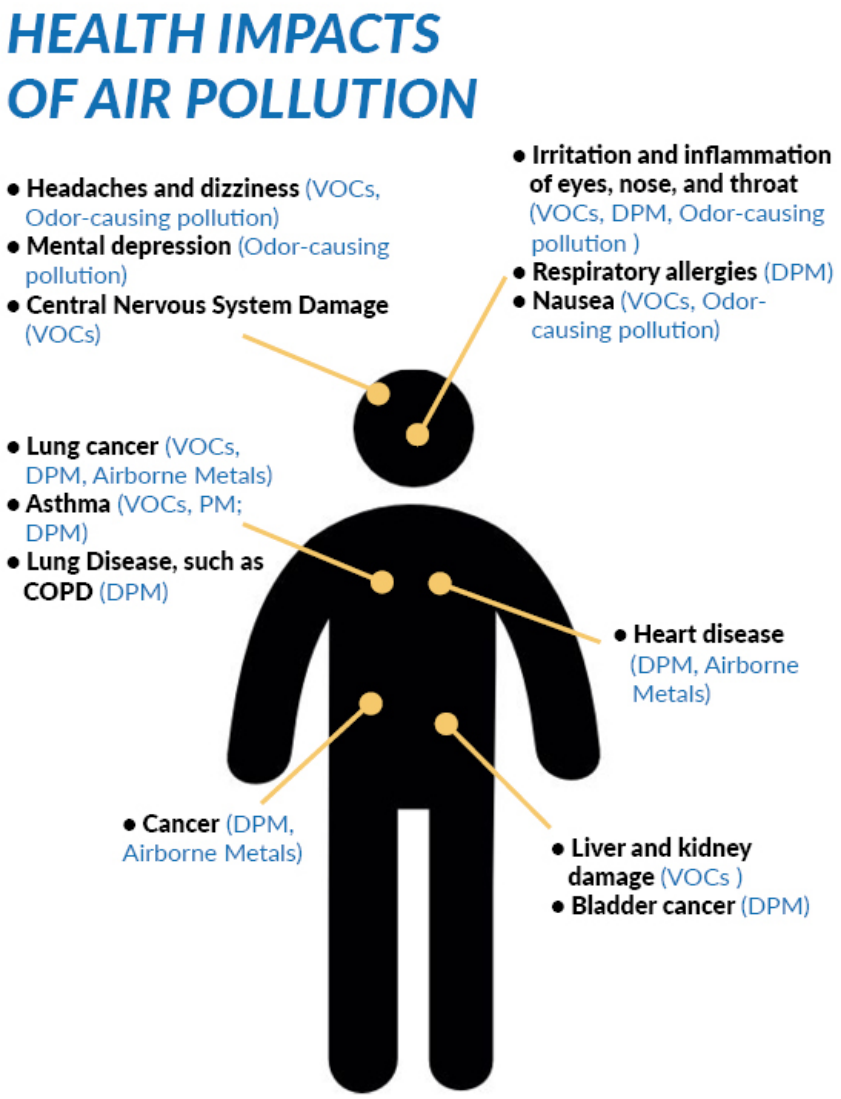
The CERP uses inventory effective (or base) year and future years consistent with CARB guidance[15] on inventory year(s) selection for AB 617 communities. The effective year or base year inventory presents an accounting of emissions in a recent year and forms the basis for all future year projections and also establishes the emission levels against which progress in emission reductions will be measured.

In addition to a base year inventory, CARB's AB 617 blueprint also requires future year inventory projections for specific milestone years during CERP implementation (fifth and tenth year after the CERP is adopted by the District Governing Board). Forecasted inventories are a projection of the base year inventory that reflects expected growth trends for each source category and emission reductions due to already adopted control measures. CARB develops emission forecasts by applying growth and control profiles to the base year inventory. Growth profiles for point and areawide sources are derived from surrogates such as economic activity, fuel usage, population, housing units, etc., that best reflect the expected growth trends for each specific source category. Growth projections were obtained primarily from government entities with expertise in developing forecasts for specific sectors, or in some cases, from econometric models. Control profiles, which account for emission reductions resulting from adopted rules and regulations, are derived from data provided by the regulatory agencies (e.g., air districts, CARB) responsible for the affected emission categories. Projections for mobile source emissions are generated by models that predict activity rates and vehicle fleet turnover by vehicle model year. As with stationary sources, the mobile source models include control algorithms that account for all adopted regulatory actions.

The baseline emissions inventory for the San Ysidro and Otay Mesa community, developed based on existing emissions and their future projections, provides information on the current level of emissions and how the emissions change in the future in a "business as usual" scenario. In other words, where the community is starting their journey towards cleaner air. Additionally, it provides a reference to determine emissions reductions from actions and strategies included in the CERP. In other words, assist SDAPCD and the CSC to know if progress is being made to reduce pollution in the community and if so, how much pollution is being reduced.

Air Pollutants[16]

There are six criteria pollutants for which U.S.EPA has established National Ambient Air Quality Standards. These include ground level ozone, oxides of nitrogen , oxides of sulfur· particulate matter (PM10 and PM2.5), carbon monoxide, and lead. Additionally, volatile organic compounds (interchangeably ROG in California) and ammonia are considered precursor pollutants that can help form ozone and particulate matter in the atmosphere. CARB has set California Ambient Air Quality Standards for the same six pollutants, as well as for four additional pollutants (hydrogen sulfide , sulfate, vinyl chloride, and visibility reducing particles). These health-based ambient air quality standards identify outdoor pollutant levels (pollutant concentrations in the atmosphere, not emissions) that are considered safe for the public - including those individuals most sensitive to the effects of air pollution, such as children and the elderly. Although there is some variability among the health effects of the six National Ambient Air Quality Standard (NAAQS) pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing.



CARB also identifies other air pollutants as toxic air contaminants (TACs), which are pollutants that may cause serious, long-term effects, such as cancer, even at low levels. Most air toxics have no known safe levels, and some may accumulate in the body from repeated exposures. CARB lists over 1,400 pollutants that are subject to reporting as air toxics. Measures continue to be adopted to reduce emissions of air toxics. Exposure to TACs can also increases the risk of non-cancer chronic and acute health effects. 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. Examples of air toxics include diesel particulate matter (DPM) which is emitted from diesel engines; metals such as hexavalent chromium; gases such as benzene, toluene, polycyclic aromatic hydrocarbons, dioxins which can be released both as combustion by products and through non-combustion processes.

There are three types of risk that are associated with TAC emissions. Cancer risk is the estimated probability of contracting cancer due to long term exposure to a TAC. Non-cancer risk is determined for TAC that can cause health effects in a short-term exposure (acute) or long-term exposure (chronic). The non-cancer risk is expressed as an index to the Reference Exposure Level (REL), the level at which health effects can be caused from breathing air that contains a TAC (if the index is less than one, the concentration of the TAC is below the REL, and if it is above one, the concentration is above the REL). Non-cancer health effects can include respiratory or reproductive harm resulting from exposure (acute or chronic) to toxic substances. Acute exposure refers to short-term contact (on the order of a few hours) with a toxic pollutant, whereas chronic exposure refers to continuous contact over long periods of time, from months to years.
The baseline emissions inventory for the International Border Communities includes an assessment of criteria air pollutants[17], their precursors, and TACs.

Air pollution affecting the community comes from sources within the community, as well as sources throughout the region. The emission inventory and source attribution analysis developed for this CERP focus on stationary, areawide, on-road mobile, and off-road mobile sources that are within the community boundary. Four major categories are identified in the inventory:

- Stationary point sources are sources that can be identified by locations and are often permitted by local air districts. Examples of stationary sources include facility point sources, such as power plants, manufacturing facilities, refineries.
- Areawide sources are those that do not have specific locations and are spread over large areas, such as consumer products and unpaved roads. These can include emissions from water heaters, gas furnace, fireplaces, wood stoves, agricultural operations, cooking as well as evaporative emissions from consumer products such as personal care products, cleaning sprays, paints) architectural coatings).
- On-road mobile sources are moving sources of air pollution such as cars, motorcycles, trucks.
- Off-road mobile sources are moving or movable sources of air pollution such as construction equipment, forklifts, all-terrain vehicles, locomotives, ships).

Community Baseline Emissions Inventory Summary

A good understanding of air pollution sources and emissions is a critical step in the CERP development and future implementation process. A baseline emissions inventory helps prioritize emissions reduction strategies and establishes a reference from which emission reductions from proposed CERP strategies can be evaluated. This section provides a summary of the current emissions scenario in the community using base year 2021 emissions inventory, and a future outlook to gauge how the baseline inventory[18] change during the CERP implementation period.

Base Year Emissions Inventory (2021): A look at the main sources of air pollution in the community.
The main sources of air pollution emissions in the community are from on-road vehicles, off-road equipment, aircrafts, solvent evaporation from certain industrial activities and consumer products, and emissions related to construction and demolition.

Table 3 provides a summary of NOx, ROG, PM10, and PM2.5 base year 2021 emissions in the community.

Source Category	NOx		ROG		PM_{10}		$PM_{2.5}$	
Stationary	66	11%	209	29%	59	4%	47	4%
Areawide	14	2%	234	33%	1,227	93%	149	11%
On-Road	148	24%	129	18%	15	1%	6	0%
Off-Road	379	63%	147	20%	12	1%	12	1%
Total (tons per year)	606		720		1,313		213	

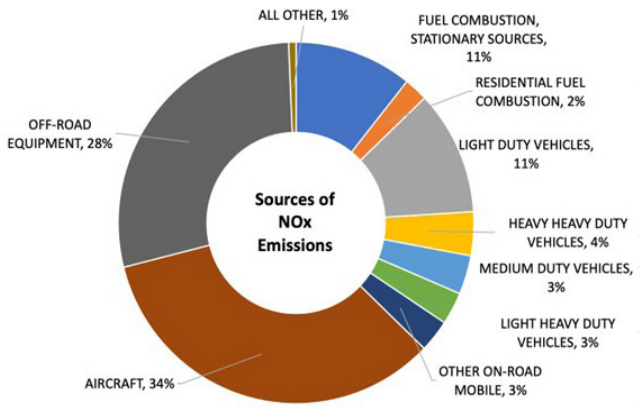


Figure 2: Sources of NOx in the International Border Communities

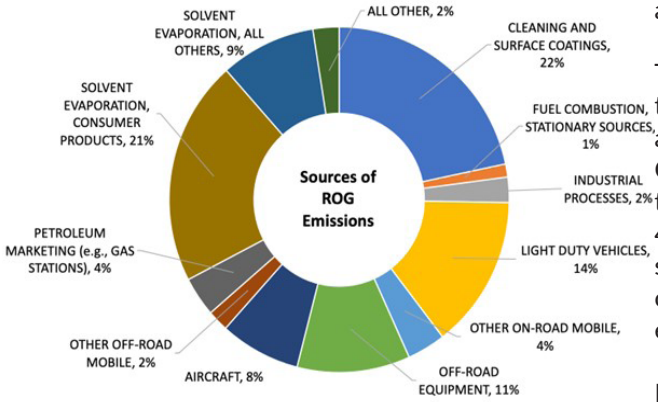


Figure 2a: Sources of ROG in the International Border Communities

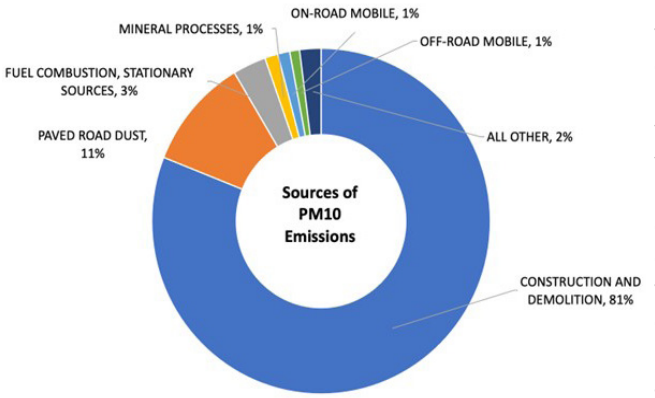


Figure 3: Sources of PM10 in the International Border Communities

Mobile sources, both on-road and off-road, account for 87% of the total NOx emissions in the community. Emissions from aircrafts (34%), off-road equipment (23%), light duty vehicles (11%), and fuel combustion at stationary sources (11%) are the significant sources of NOx in the community (Figure 2).

ROG emissions in the community are dominated by emissions from stationary (29%) and areawide (33%). Solvent evaporation from consumer products (e.g., household sprays, personal care products, barbecue light fluid) contribute to 21% of the total emissions; while solvent evaporation from industrial or commercial activities (e.g., cleaning and surface coatings, adhesives and sealants, degreasing, printing, architectural coatings, asphalt paving and roofing) contribute to 31% of the total emissions. Passenger cars (14%) and off-road equipment (11%, e.g., lawn mowers, construction equipment, compressors, generators) are the largest contributors to ROG from on-road and off-road mobile sources, respectively.

The largest sources of directly-emitted PM10 emissions in the community (Figure 3) is from construction and demolition activities (81%) and entrained paved road dust (11%). Construction and demolition activities also contribute to half of the directly emitted PM2.5 emissions in the community (Figure 4). Emissions from paved road dust (11%), fuel combustion at stationary sources (19%), and commercial cooking (7% e.g., charbroiling, deep fat frying) are other sources of directly emitted PM2.5 in the community.

In absence of a health risk analysis that encompasses all the TAC emissions within a community, it can be difficult to determine which TACs pose the greatest risks. One way to compare different toxic pollutants is to look at the Toxicity Weighted Emissions (TWE). TWE are adjusted emissions for TACs that adjust emissions using OEHHA approved health values. These are calculated by multiplying the mass emissions of each TAC by the corresponding health values as determined by OEHHA, molecular weight adjustment factors accounting for the molecular weight fraction of a compound associated with the specific health effects, maximum hours of emissions, and normalization factors (these are factors that allow the conversion of different toxic pollutant emissions into a standard to help compare pollutants to one another). TWEs are not risks, but the weighted emissions allow comparison of the contribution of each TAC to the overall toxicity using a consistent scale and help inform which TACs could be prioritized for emissions reduction and/or exposure.

Figures 5, 6, and 7 present these weighted emissions for the community. The most significant TACs in the community based on this TWE approach using cancer risk health values (Figure 5) are diesel PM, metals such as cobalt, and organic gases such as benzene and 1,3-butadiene. Diesel PM emissions are dominated by emissions from off-road mobile sources (Figure 5a). Cobalt is mainly attributable to construction and demolition[19] activities as well as dust from roadways. Both benzene and 1,3- butadiene are from on-road and off-road mobile sources. For the non-cancer chronic (long-term) TACs (Figure 6), the highest toxicity weighted emissions are for manganese and nickel from fugitive construction dust. The leading weighted emissions for acute (short-term) non-cancer TACs (Figure 7) are nickel, acrolein, benzene, and formaldehyde.

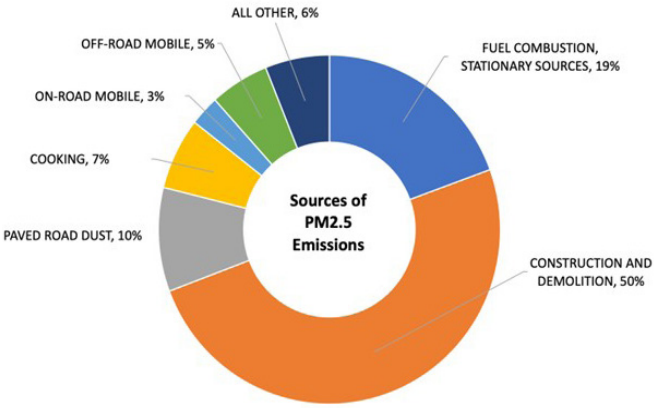


Figure 4: Sources of PM2.5 in the International Border Communities

Note that to avoid double counting of risk from constituents that also occur in whole diesel exhaust sources, the TWE analysis for area and mobile sources do not include contribution of individual chemical species that occur from diesel exhaust sources. However, one should be sure to take into account the contribution of the diesel-source species when considering particular types of detailed analysis, including for example, the diesel contribution to multi-pathway risk, to particular target organ/endpoint thresholds, and to ambient levels of individual chemicals. Some examples of the species that occur in diesel exhaust and could affect those types of detailed analyses include benzene; ethyl benzene; metals such as arsenic, cadmium, chromium, and nickel; various aldehydes; and others.

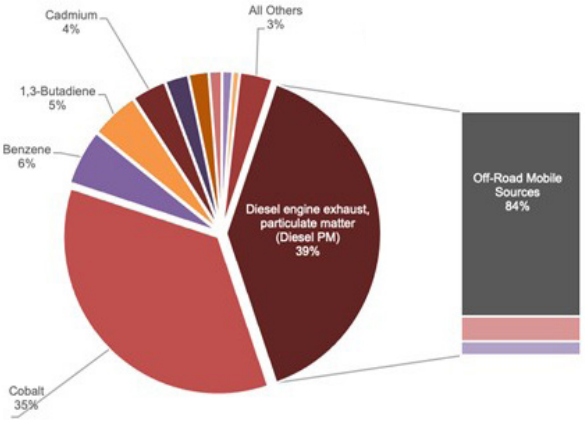


Figure 5: Relative Comparison of Toxicity Weighted Emissions using Cancer Risk Health Values (Inhalation Only)

Figure 8 presents the geographic distribution of total NOx, ROG, PM10, PM2.5, and diesel PM base year emissions in the community. The dark-colored grids with higher emissions are often concentrated in locations on or near major roadways (905, 805 freeways, & I-5), industrial sites, and border crossings. ROG includes some TACs like benzene, formaldehyde, and 1,3-butadiene. Areawide ROG emissions include emissions from solvent evaporation, residential fuel combustion, commercial cooking etc.; while areawide PM emissions include emissions from construction and demolition activities, paved road dust etc. Therefore, the highest areawide emissions occur across populated areas. Diesel PM emissions from off-road and on-road sources align with the main transportation corridors, and areas of off-road vehicles and equipment activity.

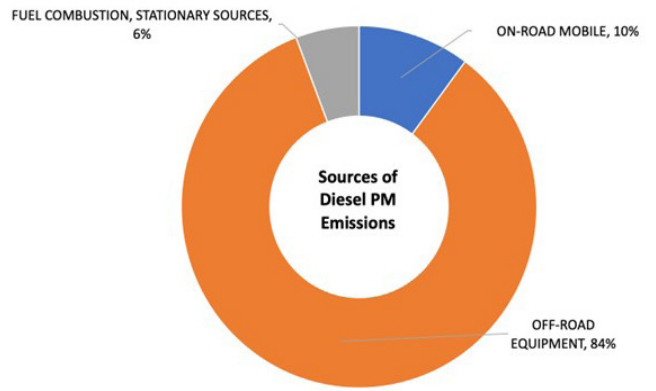


Figure 5a: Sources of Diesel PM in the International Border Communities

The location of sensitive receptors or populations is important to assess the impacts of emissions on public health. Sensitive populations are defined as people that have an increased

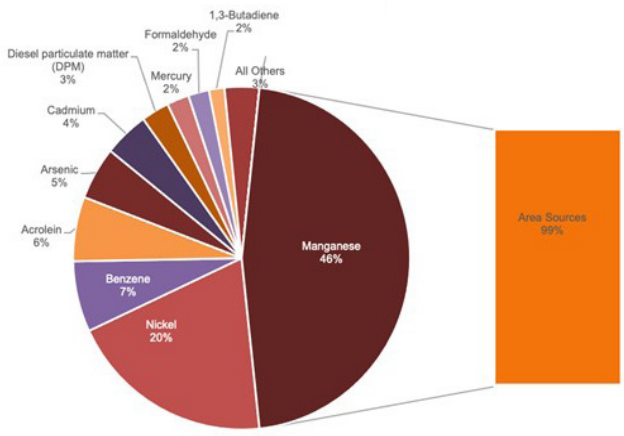


Figure 6: Relative Comparison of Toxicity Weighted Emissions using Non-Cancer Chronic Health Values (Inhalation Only)

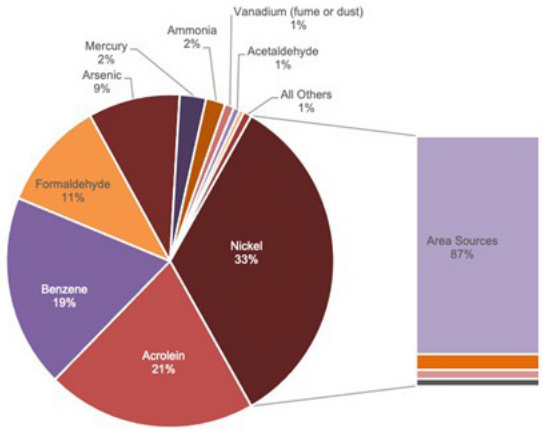
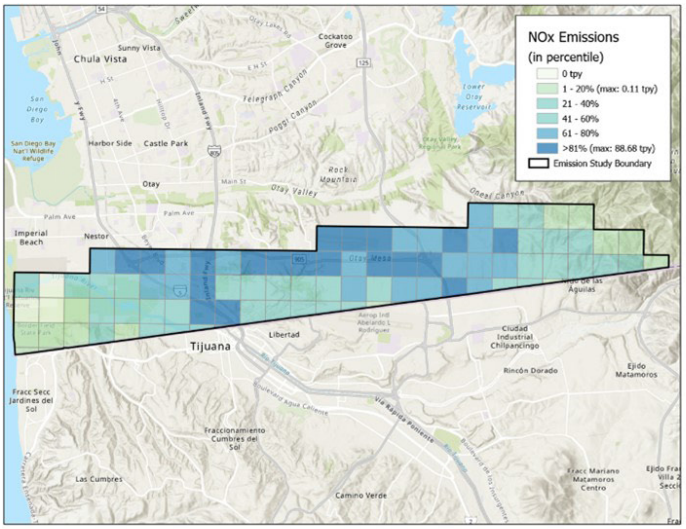
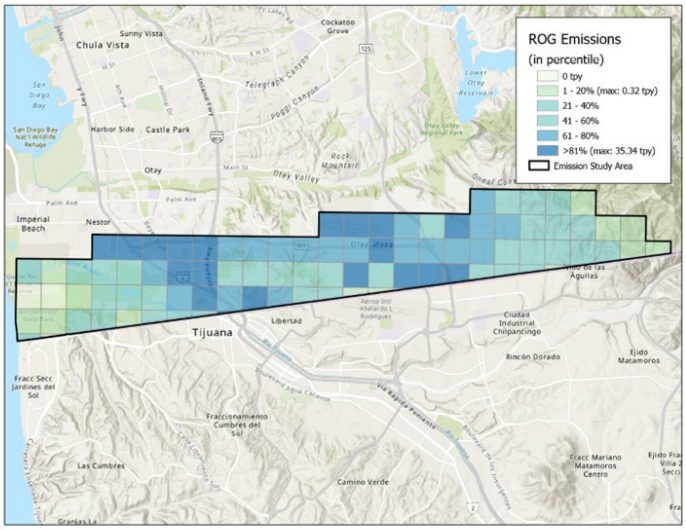


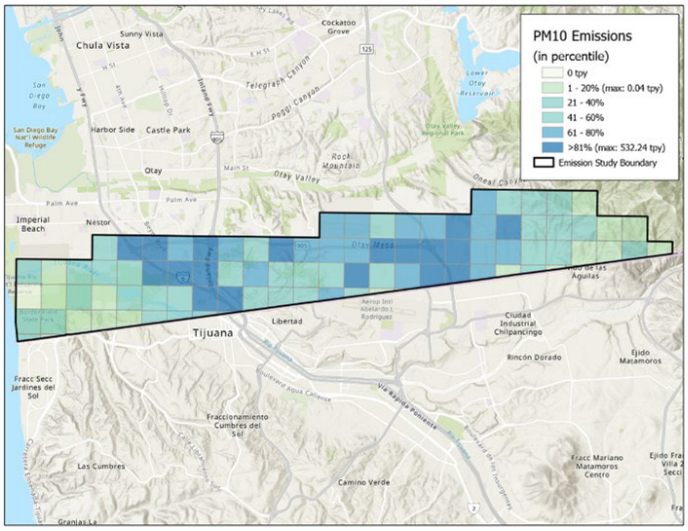
Figure 7: Relative Comparison of Toxicity Weighted Emissions using Non-Cancer Acute Health Values (Inhalation Only)

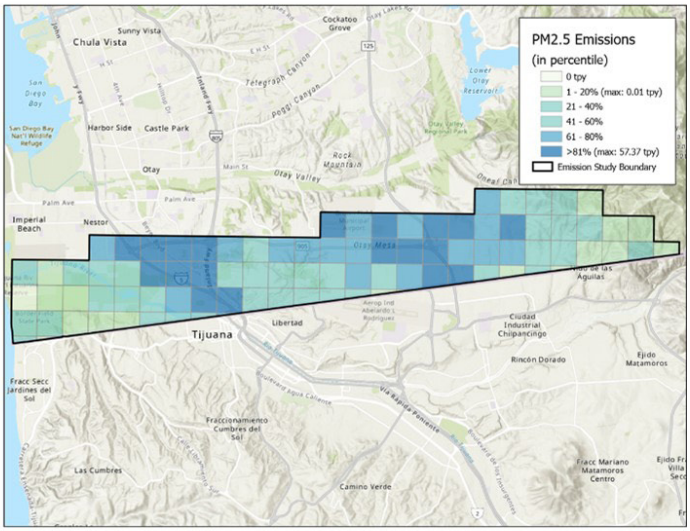
sensitivity to air pollution or environmental contaminants, such as schools, daycare centers, nursing homes, elderly care facilities, hospitals, etc. The map below shows sensitive receptor locations within the community. Sensitive receptors within the community are in proximity to mobile on-road sources, manufacturing and industrial sources, off-road mobile equipment, and residential fuel combustion sources. This community has an approximate population of 64,400 and includes about 8 schools, 1 senior care facility, 5 daycare facilities, and 7 hospitals or clinics.
Forecasted Emissions Inventory 2029/2031: A look at the baseline emissions inventory during CERP implementation period.

The section summarizes how the emissions inventory is expected to change for the community in the future due to SDAPCD and CARB rules and regulations. Figures 9 and 10 show the total base year 2021 and forecasted future year 2029 and 2034 emissions inventories for the community. As described earlier, future emissions of criteria pollutants and TACs in the community are forecasted using best available information representing projected future activity data, population and economic growth economic and emission control related data from the implementation of existing SDAPCD and CARB regulations. The baseline projections do not take into effect the impacts form regulations that are currently being developed or considered as an emissions reduction strategy in the CERP. SDAPCD has several rules which control both criteria and TAC emission from facilities operating in the community. Stationary source emissions are relatively small and remain unchanged due to existing District regulations. ROG and PM emissions trends are slightly increasing, specifically from areawide sources, likely due to future growth assumptions (e.g., increasing population that increase the use of personal products and other consumer products relating to coating and cleaning solvents for ROG; and fugitive dust related to increasing construction activities from new residential and commercial buildings and/or road construction for PM). CARB's implementation of several adopted mobile source regulations for both on-road and off-road sources continue to reduce DPM, NOx, ROG and other air pollutant emissions in community. Even while the PM emissions from mobile sources continue to decrease, total PM10 and PM2.5 emissions show a slight increase during this period, primarily due to other sources of these emissions such as construction and demolition activities[20] which are not regulated (see figure 10).









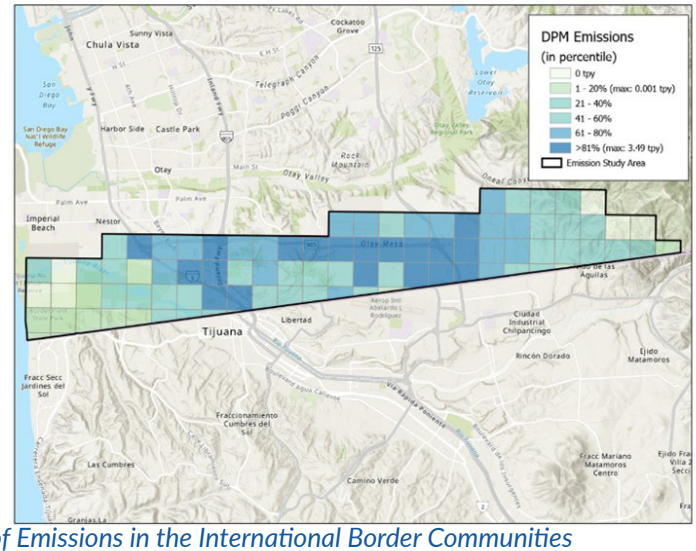


Figure 8: Spatial Distribution of Emissions in the International Border Communities

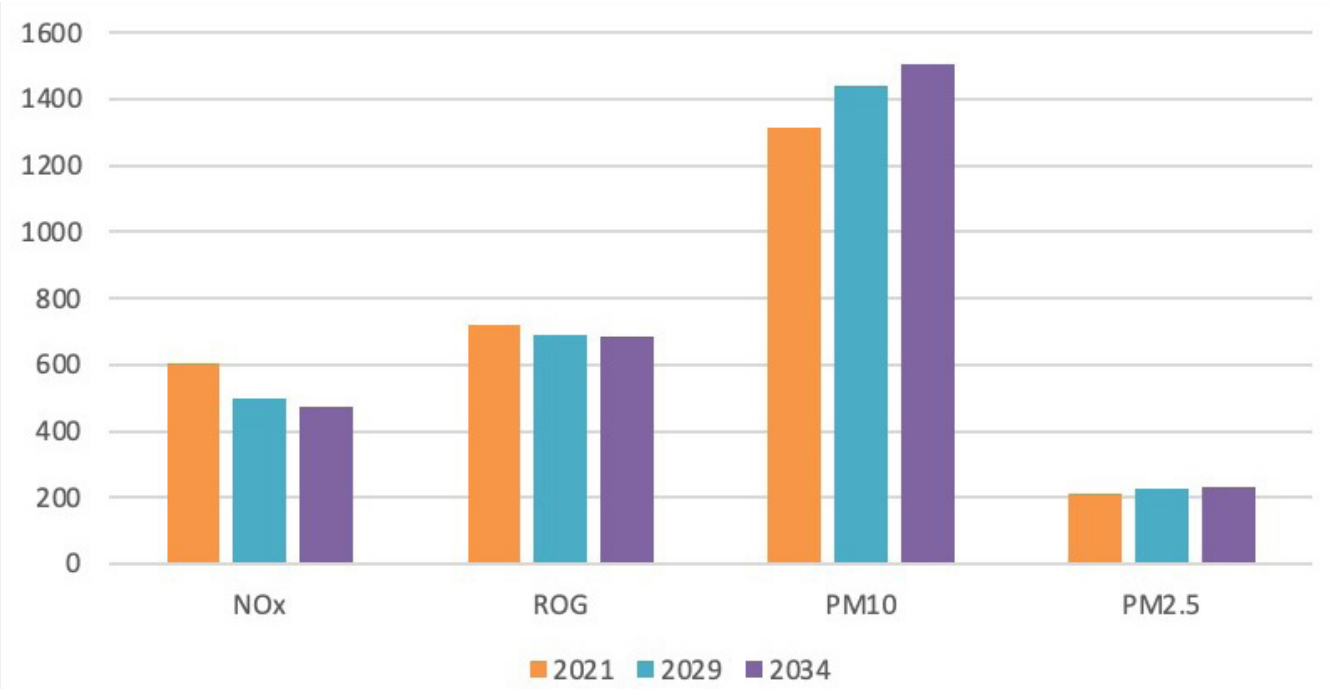


Figure 9: Total Emission Trends for NOx, ROG, PM10 and PM2.5 for 2021, 2029, and 2034

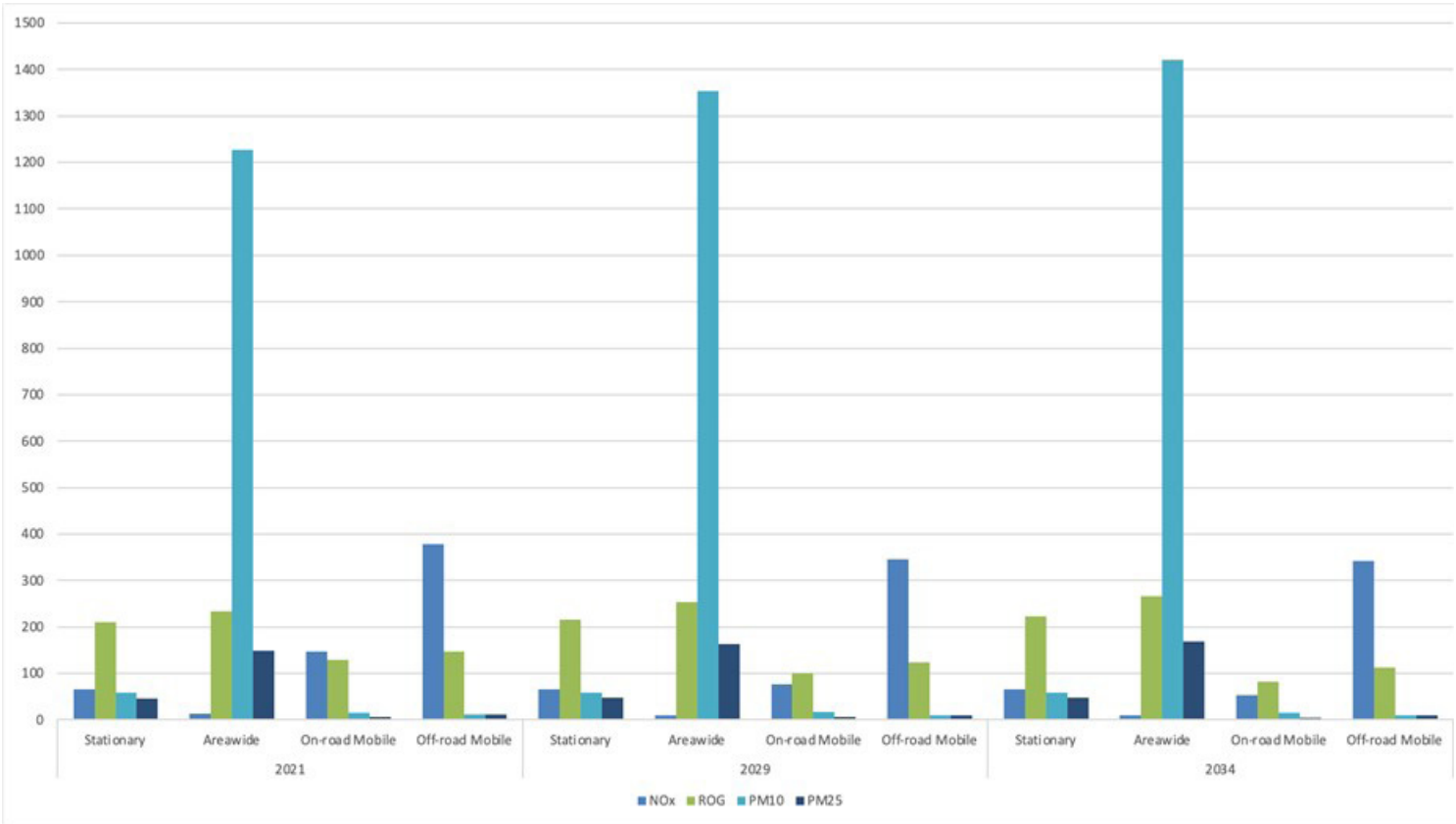


Figure 10: Emission Trends by Source Category for 2021, 2029, and 2034

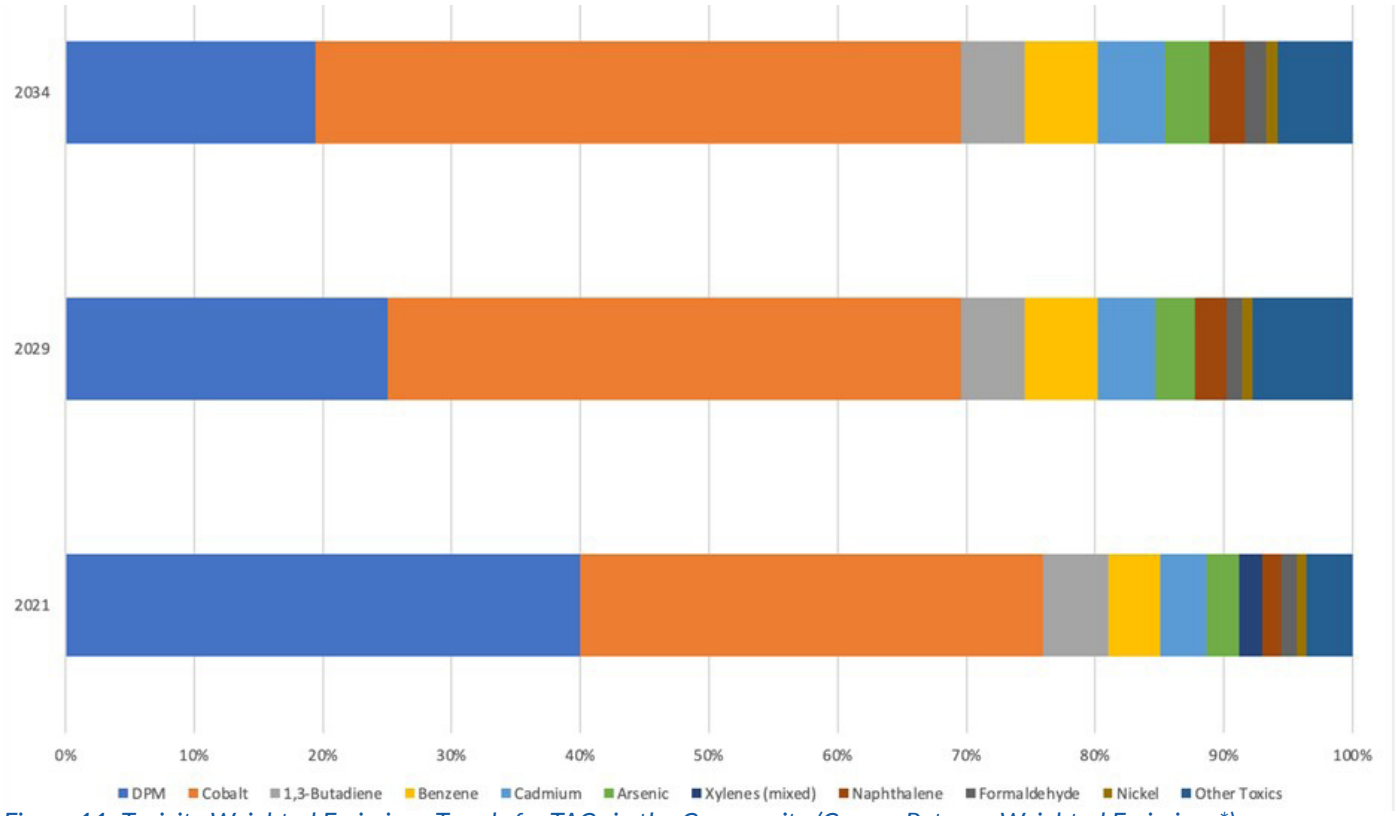


Figure 11: Toxicity Weighted Emissions Trends for TACs in the Community (Cancer Potency Weighted Emissions)*

The projected trend for TAC emissions is presented in Figure 11, using the same cancer-risk toxicity weighted emissions approach discussed earlier in the base year inventory. The contribution of Diesel PM emissions to the total toxics emissions in the community significantly decreases through 2034, due to existing diesel vehicle emission regulations and turnover from older, higher polluting vehicles to cleaner vehicles. Similarly, other mobile source related TACs such as benzene and 1-3 butadiene also show a slight decrease. However, emissions of some heavy metals such as cobalt from construction and demolition[21] activities show a projected increase during this period, mainly because of the growth assumptions used to project future construction activities in the region (purely a calculated estimate based using assumptions and equations).

It is important to note that the toxics emissions data and analysis presented in this section is an exercise in evaluating total TAC emissions in the community. This is not a localized health risk assessment which takes into account specific emission source parameters (e.g., temperature, stack height, distance from nearby receptors), the proximity and types of receptors around the facility, and local meteorological conditions.

For the IBC community, mobile sources, especially off-road mobile, contribute most of NOx and DPM emissions. Emissions of DPM and other mobile source related toxics (e.g., 1,3-butadiene) are expected to decrease by 60 percent from 2021 through 2034 due to existing diesel vehicle emission regulations and turnover from older, higher polluting vehicles to cleaner vehicle. Areawide sources,[22] specifically fugitive dust from construction activities, contribute most of PM emissions and its speciated heavy metal TACs. Consumer products, gas stations, and mobile sources contribute to ROG emissions. The spatial maps show higher emissions in areas adjacent to major road corridors (e.g., 905, 805, & I-5), industrial sites, and border-crossing. Future emissions in the community are projected to decline in future years from several already adopted SDAPCD and CARB regulations. Additional reductions from mobile sources will continue to occur in all California communities from the many statewide proposed CARB regulations that are currently being developed.

Methodology and Uncertainties in Emissions Inventories

Emissions were calculated using methods that best collected the activity data, such as product or fuel use, vehicle miles traveled, or population density, that results in the emissions. Stationary source emissions were calculated by using SDAPCD's Emission Inventory data that was provided by regulated facilities. Area and both off-road and on-road mobile source emissions were estimated through multiple channels, such as fuel consumption tracking, population, and other data, paired with the U.S. Environmental Protection Agency and CARB emission factors for those sources. Population, employment, housing, roads and railways were also considered when determining emission sources and their impact. For the area and both off-road and on-road mobile sources, County information for all the metrics were narrowed down into the emissions study area to determine community emissions (including some areas just outside the community).

Over the years, emission inventories have become more robust, and improvement and updates to emission inventories are continuously made to ensure the most accurate inventory is used for emission focused programs, such as the community emission reduction program. Community-scale emission inventories for stationary, area, and mobile sources are developed using the best and latest available data inputs for estimating and spatially allocating emissions. Emissions from sources are estimated using a variety of inputs, such as activity data, emission factors, data that can be used to aid in understanding community-level issues (i.e., spatial surrogates), future growth and control factors, and pollutant speciation profiles. However, with each input, a level of uncertainty can exist when calculating emissions within a community due to data availability, representativeness, and limitations, and disparity between county or regional level data to community level data in a meaningful manner.

For all sources, activity and emission factors used to calculate emissions might be incomplete, outdated, and not completely represent the current year or community. For example, activity profiles for a pollution source might be developed either based on reported data, survey results, reported studies, or purchased data from previous years and might not accurately represent the current year of an emission inventory. Area and certain off-road mobile source estimates which are based on general methodologies that use regional activity assumptions and generic industry-wide or average emission factors have inherent uncertainties in the estimates. The speciation profiles used to calculate toxic air contaminants are based on information from literature reviews and lab testing and may not always reflect all emission processes and activities resulting in those emissions. Additionally, speciation profiles might not include all toxics emitted from a specific source or in some cases it may include additional toxics compared to the pollutants that are emitted.

Spatially allocating emissions related to area, off-road mobile, and on-road mobile sources within communities can sometimes be difficult due to not having complete and detailed information related to activity location data for some source categories. In this case spatial surrogates which best fit emission activity are developed to allocate county level total emissions to the local level. For example, emission from consumer products is estimated using overall sales data, and spatially allocated within the community using population as a surrogate. Future year emission projections use many assumptions based on industry-wide economic forecasts, historical data, adopted regulations etc., making it challenging to project accurate emission estimates even at regional scales, let alone at the community level. Additionally, current forecasting factors do not consider current events like the ongoing pandemic and its lingering impacts on the economy, and therefore inventories for future years beyond 2023 may need further revisions as better data becomes available.

Photo Source: San Diego Union Tribune

AIR MONITORING

This section will describe current and future air monitoring in the International Border Communities of San Ysidro and Otay Mesa. It will also include a high-level analysis of current air quality conditions that will help inform what the baseline is for current air pollutants that we can use to compare future air quality conditions to determine if conditions are improving or worsening. Air monitoring involves collecting air samples to determine air pollution levels at the time and place of collection. The data collected from air monitoring will allow SDAPCD to evaluate air quality over time, including how air pollution levels change and where levels may be higher or lower within the International Border Communities. Air quality monitoring data will also be used to evaluate emissions reduction strategies, which will be discussed in detail in the following section.

Particulate Matter

Available monitoring data for particulate matter and diesel particulate matter highlight the connection between heavy traffic and high levels of these types of air pollution. Higher levels of particulate matter and diesel particulate matter are associated with negative health outcomes, including cancer, asthma, bronchitis, and cardiovascular disease. The annual health-based standard for PM2.5 set by the EPA is 12.0 µg/m3. Annual PM2.5 averages above this level are considered harmful to human health.

Continuous PM2.5 monitoring data in the International Border Community began in August of 2022 at SDAPCD's Donovan State Prison monitoring station. SDAPCD has also monitored for PM2.5 at other sites throughout San Diego County. However, due to technological advancements and funding opportunities, different and newer measurement techniques have been implemented over time, which complicates data comparisons. Research has found that when different measurement techniques are used concurrently at the same site, data differences often occur between the two measurement techniques. Ongoing research is being conducted to clarify how to compare data sets from different measurement techniques. To simply the data comparisons SDAPCD, in late 2022 and early 2023, has invested in updating all of its PM2.5 instruments to a common measurement technique.

The PM2.5 data presented in Table 4 includes data from two different measurement techniques: one based on collecting air samples on filters over a 24-hour period and weighing them, and the other based on shining a special type of light on an air sample to measure particles, which provides real time data.

Table 4: Average Monthly PM2.5 Concentrations from August-December 2022 for San Diego County Air Monitoring Sites. Sites with continuous, light-based sampling are denoted with a 1, and sites with filter-based sampling are denoted with a 2.

Air Monitoring Site	August	September	October	November	December
Donovan State Prison[1]	13.28	14.40	16.97	13.71	15.85
Camp Pendleton[1]	NA	10.59	9.17	7.08	8.72
Alpine[1]	NA	7.66	9.24	5.02	4.45
El Cajon – Lexington Elementary School[1]	NA	8.88	10.35	9.53	11.52
San Diego – Sherman Elementary School[1]	9.74	10.08	10.49	9.17	11.24
San Diego – Rancho Carmel Drive[2]	8.79	9.09	8.06	6.18	6.15
San Diego – Kearny Villa Road[2]	7.99	8.44	7.16	5.25	4.91
Chula Vista[2]	9.00	9.36	8.59	7.41	8.77

[1]Light-based sampling
[2]Filter-based sampling

Diesel Particulate Matter

Diesel particulate matter cannot be measured directly, because it cannot be separated or differentiated from other particulate matter. Despite this, the Office of Environmental Health Hazard Assessment establishes reference exposure levels for different chemicals. Pollution levels under this reference exposure level are not expected to cause negative health effects depending on the duration of exposure; duration can be broken down into three categories: acute (1-hour), 8-hour, and chronic (lifetime). Although no acute or 8-hour reference exposure levels have been established for diesel particulate matter, the chronic reference exposure level for diesel particulate matter is 5 µg/m3. Despite this standard, no level of diesel particulate matter is considered safe for human health, and the strategies outlined in this CERP will therefore have the goal of sustained reductions in diesel particulate matter levels in the International Border Community.

As SDAPCD cannot measure diesel particulate matter directly, two markers for diesel particulate matter will be monitored instead: black carbon and elemental carbon. It is important to note that black carbon and elemental carbon levels are not direct comparisons for diesel particulate matter. For instance, a black carbon level of 4 µg/m3 does not mean that the corresponding diesel particulate matter level is also 4 µg/m3. Research into the relationship between these markers and the true diesel particulate matter levels is ongoing.

Black carbon levels are typically higher in San Ysidro than any of SDAPCD's monitoring sites in the Portside Communities, another AB-617-designated region. Table 5 below shows that San Ysidro had the highest black carbon concentration (relative to three Portside monitoring sites) for 241 out of the 366 days in the year 2020. Table 6 provides the annual averages for black carbon at San Ysidro and at Alpine, where diesel particulate matter levels are typically very low, making Alpine an ideal site to measure relatively clean air. An ambient air health standard has not been formally established for black carbon by either the EPA or the California Air Resources Board (CARB), but research into the relationship between black carbon levels and adverse health effects are ongoing. No level of black carbon exposure is considered healthy, and reduction of black carbon levels is a key priority in this CERP. SDAPCD will continue to monitor for black carbon in the coming years to assess whether the strategies outlined in this document are successfully lowering the measured levels.

Elemental carbon monitoring began in the International Border Community at the Donovan State Prison monitoring station in December of 2022. Monitoring will expand to the San Ysidro monitoring station in September of 2023 and other sites when they become available. No baseline levels are available due to the limited amount of data that has been collected.

Table 5: Number of days black carbon levels were highest for four monitoring sites in San Diego County. The asterisk (*) denotes Portside Community monitoring sites.

Year	Black Carbon Annual Average at San Ysidro (µg/m^3)	Black Carbon Annual Average at Alpine (µg/m^3)
2020	1.27	0.37
2021	1.00	0.29
2022	0.95	0.24

Table 6: Annual average black carbon levels at San Ysidro and Alpine, 2020-2022.

San Ysidro	Marine Terminal*	Oceanview Boulevard*	Sherman Elementary School*
241	60	47	19

Volatile Organic Compounds

Along with vehicle emissions, volatile organic compounds can also be released by factories, various chemicals, and even household products, along with many more sources. Each compound is unique from all others in how hazardous it is to human health, so the safe level of one compound can differ greatly from the safe level of a different compound. Health effects from volatile organic compounds include cancer, asthma, nausea, headaches, dizziness, irritation of respiratory passages, liver and kidney damage, and more.

In Table 7 below, the group of volatile organic compounds in the Tier I category, the most hazardous group, are listed along with their average levels at the Donovan Monitoring site from 2014-2021, the one-in-a-

Table 7: Average levels of Tier I volatile organic compounds alongside one-in-a-million cancer levels and other health effects levels. Compounds which have average levels that exceed the one-in-a-million cancer level are shaded in orange; compounds which have levels that exceed the other health effects level are shaded in yellow. *SDAPCD began monitoring for ethylene oxide in August 2023. Data is not available at the time of writing.

Compound	Average Concentration* (ppbv)	One-in-a-million Cancer Level (ppbv)	Other Health Effects Level (ppbv)
Acrolein	0.12	NA	<0.01
Benzene	0.21	0.04	0.91
1,3-Butadiene	0.03	0.01	0.09
Carbon tetrachloride	0.08	0.03	1.59
Chloroform	0.02	NA	2.01
Ethylene oxide*	NA	<0.01	NA
Tetrachloroethylene	0.01	0.56	0.59
Trichloroethylene	0.03	0.04	0.04
Vinyl chloride	<0.01	0.04	3.91

million cancer level (defined below), and the level above which other health effects besides cancer would be expected to occur in people. The one-in-a-million cancer level is where, if one million people were exposed to it, one of those people would be expected to be diagnosed with cancer. This is also referred to as the 10^-6 cancer risk concentration. Levels are reported in parts per billion by volume (abbreviated as ppbv in the table). Parts per billion are similar to percentages, but much smaller. For example, 70% means 70 out of one hundred, while 70 parts per billion means 70 out of one billion.

Metals

Small metal particles can be released into the air from vehicle exhaust, tire and brake wear, and roadside dust. In addition, some industrial facilities including scrapyards and rail yards can be sources for airborne metals. Like volatile organic compounds, each metal is unique in how hazardous it is at a given level. Health effects can include cancer, heart disease, and more.

In Table 8 below, the group of metals in the Tier I category are listed along with their average levels at the Donovan Monitoring site from 2016-2018, the one-in-a-million cancer level, and the other health effects level. Levels are reported in nanograms of each metal per cubic meter of air (abbreviated as ng/m3 in the table). A nanogram is one billionth of a gram.

Table 8: Average levels of Tier metals alongside one-in-a-million cancer levels and other health effects levels. Metals which have average levels that exceed the one-in-a-million cancer level are shaded in orange; compounds which have levels that exceed the other health effects level are shaded in yellow.

Metal	Average Concentration* (ng/m^3)	One-in-a-million Cancer Level (ng/m^3)	Other Health Effects Level (ng/m^3)
Arsenic	0.73	0.23	1.5
Beryllium	0.02	0.42	2
Cadmium	0.73	0.56	1
Lead	38.13	NA	15
Manganese	22.73	NA	30
Nickel	5.30	2.10	9

Modeling Data

As opposed to monitoring data, which directly measures air samples for pollution levels, modeling data is a prediction or forecast of how pollutant emissions will distribute through a region. Modeling data reinforces the need for air quality improvements in the International Border Communities. For PM2.5, both San Ysidro and Otay Mesa rank in the top 10% for highest burden in the state of California. Similarly, San Ysidro census tracts rank in the top 25% for diesel particulate matter burden. The two census tracts that comprise Otay Mesa rank at the 83rd and 91st percentile for toxic air emissions from facilities. Besides air pollutants specifically, both San Ysidro and Otay Mesa rank in the 100th percentile for traffic burden, which leads to higher air pollution levels.

Residents of San Ysidro also report airborne odors due to wastewater contamination of the Tijuana River. Aging water treatment plants in Baja California and a lack of critical wastewater infrastructure allow sewage and refuse to persist in the Tijuana River as it crosses the International Border into the United States. Although the South Bay Water Reclamation Plant on the United States side of the border has the capacity to process 15 million gallons of wastewater each day, this plant is overburdened and unable to fully process the incoming water. The flow continues through the Tijuana

River Valley to the Pacific Ocean, releasing odors into surrounding areas and necessitating frequent beach closures in Imperial Beach and Coronado. Together, the United States and Mexican governments have pledged $474 million toward projects designed to improve water quality and water treatment infrastructure; these projects are projected to finish in 2027.

Residents of the International Border Community experience adverse health outcomes often associated with poor air quality. Per data available from the San Diego County Health and Human Services Agency, the South Region of San Diego County exceeds the County average rates in hospitalizations and emergency department discharges in asthma, pneumonia, coronary heart disease, and chronic obstructive pulmonary disease. Additionally, San Ysidro ranks in the 80th percentile for emergency department visits due to heart attacks.

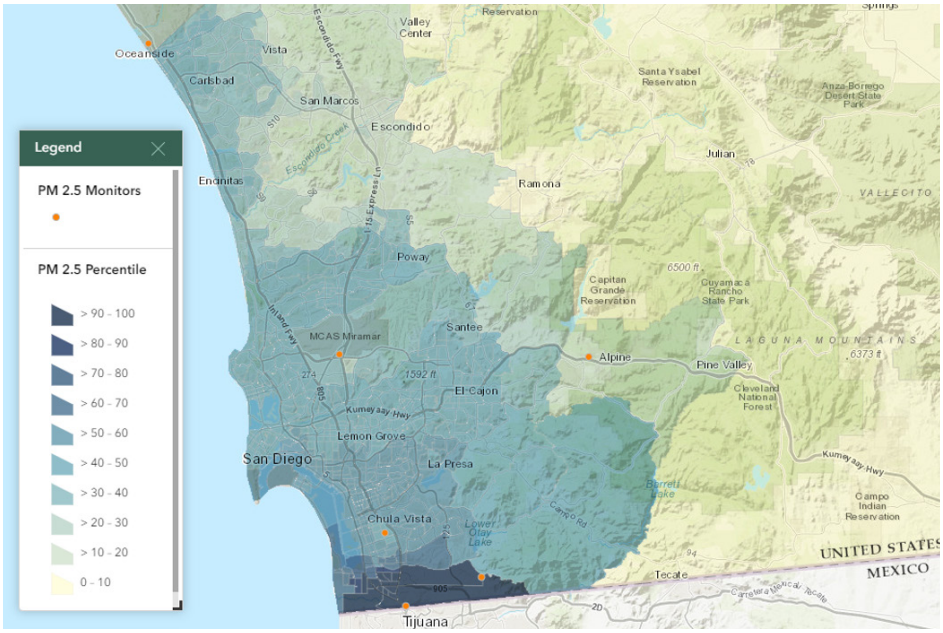


Figure 12: CalEnviroScreen 4.0 map displaying PM2.5 percentile by census tract in San Diego County. Census tracts near the border experience the highest PM2.5 burden in the county.

Air Monitoring Plan

SDAPCD has decided to monitor for the following broad classifications of air pollution: particulate matter, diesel particulate matter (by way of black carbon and elemental carbon), volatile organic compounds, airborne metals, and odor-causing chemicals. Figure 13 below details which types of pollution will be monitored at which air monitoring sites, both existing and proposed.

Air pollution emission reduction strategies, which will be described in detail in the next section of this document, will aim to reduce the release of these types of pollution. As described above, baseline levels have been or are being established for PM2.5, black carbon, volatile organic compounds, and airborne metals. SDAPCD has acquired equipment to begin establishing baselines for the remaining pollutants. Future monitoring data will be compared to these baselines to continually evaluate emission reduction strategies. The strategies are divided into the following categories: Community care, passenger vehicles, heavy-duty vehicles, cross-border airflow, and other.

Community Care

SDAPCD will establish monitoring sites at schools and in residential areas to assess how pollution levels change over time and how these levels correlate with public health metrics. In addition to traditional monitoring sites with large, heavy air monitoring equipment, SDAPCD will procure smaller, portable sensors that will help fill in gaps in the air monitoring network.

Passenger Vehicles
SDAPCD will analyze particulate matter, volatile organic compounds, and airborne metals data from its existing monitoring station at the San Ysidro Fire Station #29 and upcoming monitoring sites near major roadways. International Border wait time data will also be incorporated into analysis. This data will determine how well emission reduction strategies are reducing pollution from passenger cars and other non-diesel vehicles.

Heavy-duty Vehicles
As with passenger vehicles, SDAPCD will assess the same types of data in addition to diesel particulate matter data to assess the impacts of and strategies toward heavy-duty vehicles. International Border wait time data from Otay Mesa will be especially important to this analysis. Monitoring sites will be established in Otay Mesa due to the high number of warehouses and freight truck traffic.

Other Sources
Data from the monitoring site in Otay Mesa will help SDAPCD evaluate the air quality effects from the two airports near the International Border Community: Brown Field Municipal Airport and Tijuana International Airport. Furthermore, particulate matter sensors will be used to determine contributions from off-road vehicles.

Cross-border Airflow
SDAPCD will deploy sensors for odor-causing chemicals, such as hydrogen sulfide, in the Tijuana River Valley and surrounding residential areas. Data from these sensors will help to determine effectiveness of projects designed to mitigate the ongoing contamination of the river and surrounding air. In addition, SDAPCD will contribute to broadening the air pollution sensor network and sharing data with officials in Baja Californian and Mexican government agencies.

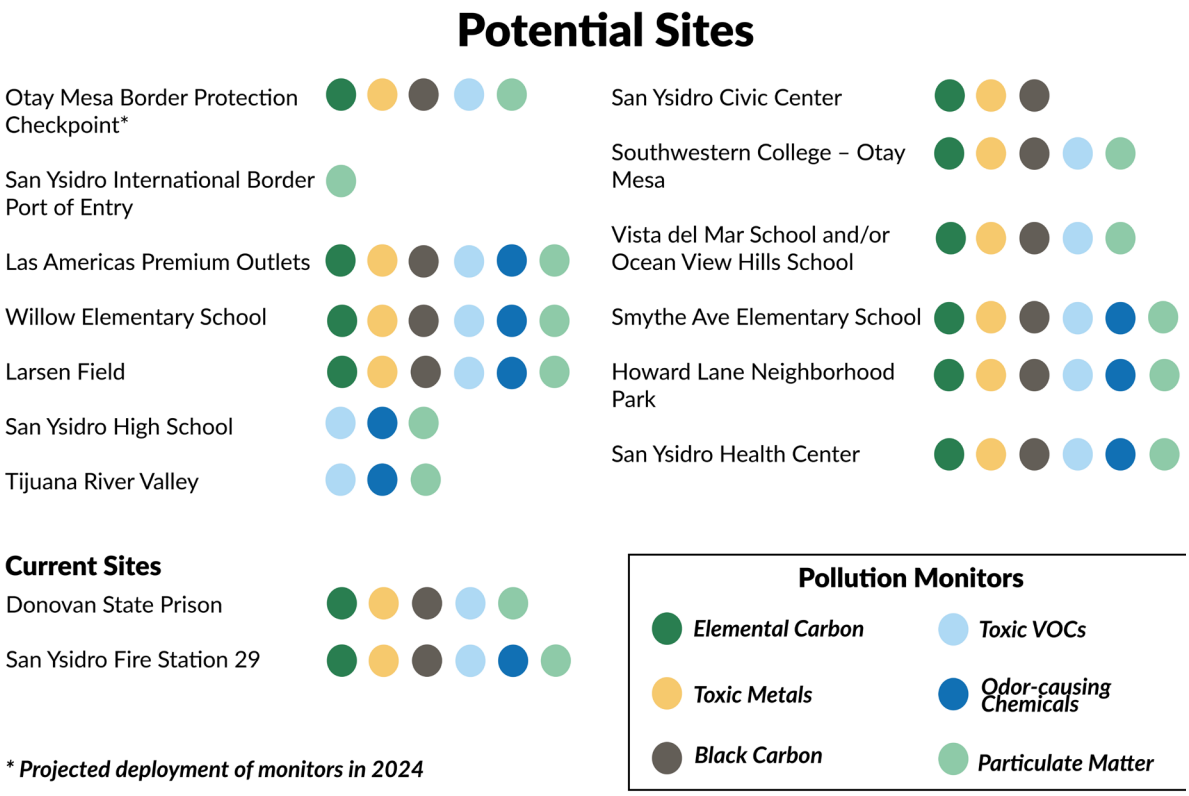


Figure 13: Proposed and current air monitoring sites and which types of pollution will be monitored at each.

Photo Source: San Diego Union Tribune

CHAPTER 4: STRATEGIES

At the heart of the Community Emissions Reduction Program (CERP) are the actionable strategies co-developed by the Internal Border Community Steering Committee (IBCSC). Prior to the development of these strategies, IBCSC identified the priority air quality issues their community is facing. Hence, each of the strategies seeks to address these community-identified priorities, also known as targets. The strategies address the following targets: community care, passenger vehicles, heavy-duty vehicles, other mobile sources (trains, planes, ATVs), and cross-border air quality issues. These strategies emerged through a series of SDAPCD facilitated workshops which took place during virtual and in-person IBCSC meetings from February 2022 to October 2023.

Some of these strategies described in this chapter reflect original ideas of the committee and community members. Others are inspired from CERP strategies that have been developed by other communities throughout the State selected for the AB 617 Community Air Protection Program. CARB staff also shared the most relevant upcoming and recently adopted CARB regulations, including State Implementation Plan (SIP) policies with the IBCSC for their consideration. Statewide CERP strategies were shared with the IBCSC via a spreadsheet adapted from the draft summary of all strategies and actions in adopted CERPs that can be found here. SDAPCD also worked with their public agency partners, San Diego Association of Governments (SANDAG) and Caltrans, to review and identify relevant strategies documented in previous planning efforts that could significantly reduce emissions from the key targets. These previous planning efforts include California-Baja California Border Master Plan; San Diego and Imperial Counties Sustainable Freight Implementation Strategy; Zero Emission Freight Transition white paper; and 2021 SANDAG Regional Transportation Plan. Regardless of its origin, all the strategies in the CERP were co-developed, reviewed, and supported by the IBCSC.

The Community Air Protection (CAP) Program includes many elements that work together to reduce air pollution in the most heavily impacted communities, including CAP Incentives. CAP Incentives support a wide range of project types including new types identified by communities to address the strategies in their CERPs. Existing project types already available include: incentives to replace old, high-polluting heavy-duty on-road and off-road vehicles and equipment, marine vessels, and locomotives; incentives to reduce hexavalent chromium emissions from chrome plating activities; and a variety of incentives to reduce exposure to toxic air contaminants in schools through classroom air filtration upgrades, purchase of low- or no-formaldehyde composite wood products, and incentives to replace old lawn and garden equipment with zero-emission alternatives. Alongside these existing options for incentives, the air district and the community can work together to develop brand new community identified project types to address many of the strategies in this document. As an example, for how incentives can be leveraged to meet these strategies, Community Care Strategy 5 calls for developing vegetative barriers among other things to reduce exposure for sensitive receptors within 500 feet of freeways -- the air district and the community could consider working together to create a new vegetative barriers project type for incentives to help address this strategy. Please visit CARB's web page for a complete list of the projects air districts and their communities have created to date statewide.

STRUCTURAL ELEMENTS FOR SUCCESS

To ensure the successful implementation of the strategies developed by the IBCSC and the achievement of the overall goals and vision, there are three key structural elements that must be considered and addressed. First, leveraging SDAPCD relationships is important because many of the strategies identified will require the partnership of multiple government agencies and other stakeholders because the actions are outside SDAPCD's regulatory authority. Second, for some of the actions within SDAPCD's regulatory authority and that would fall within SDAPCD's role and responsibilities, SDAPCD currently does not have the necessary capacity to implement the CERP to the fullest of SDAPCD's potential. Therefore, actions to build the capacity of SDAPCD will be critical to the CERP's fullest implementation. Third, there is a unique opportunity to improve relationships and transparency with the community

through the deep democratic process of participatory budgeting. The CERP process is about much more than emission reductions, it provides a space to build relationships to repair and address past and present harms and connect directly with the community to not only co-identify priority issues and strategies, but also include community in co-implementation.

Leveraging Relationships and Positionality

SDAPCD may have some limitations related to mobile source enforcement and land use authority. However, SDAPCD is committed to working with public agency partners and others to continue to bring these entities to the community's table to implement these strategies and identify solutions to overcome barriers to making a meaningful reduction of air pollution and improving public health and quality of life.

Building Capacity

Additionally, SDAPCD may have limited funding streams, many of which are already fully encumbered to meet ongoing mandated requirements, to fully implement its responsibilities as stated in the community-developed strategies. SDAPCD role descriptions with an asterisk (*) next to them indicate that additional capacity or resources are needed to implement. SDAPCD is committed to identifying and developing strategies to be able to increase capacities and resources to fully implement the CERP through evaluating the reallocating existing resources, asking the board for revenue-generating actions for cost recovering, seeking grants, and other efforts.

Participatory Budgeting

Participatory budgeting "is a democratic process or method in which community members engage in deliberation and help decide how part of a public budget is spent. It gives the people real power over real money." Participatory budgeting processes help promote transparency, which can strengthen the relationship between the government and residents. SDAPCD will work with the IBCSC to co-develop a participatory budgeting process that will help guide how and what types of projects are prioritized through the SDAPCD incentive program. There are several strategies listed in this chapter that could potentially be funded through the SDAPCD incentive program.

The following section with tables is organized by priority issue. Each priority issue has a series of strategies and associated actions, metrics, and timeline. Additionally, each strategy is categorized by type and indicates which entities will be important for the IBCSC to partner with to implement the listed actions.

Figure 14: Participatory Budgeting Process[23]

COMMUNITY CARE

Goal: Protect children, elderly, chronically ill, and other groups that are vulnerable to air pollution exposure.[24]

Community Care//Strategy 1 Reduce air pollution exposure at schools.	**Type** Incentives	**Timeline** Short-Term (1-3 years)
Actions 1. Collaborate with school districts to pursue funding opportunities (i.e., grants, school budget, prioritized SDAPCD incentive funding, etc.) for air filtration systems, ZE buses, urban greening/green barriers, and charging stations.		
Metrics • 100% of Willow Elementary, San Ysidro Middle School, Sunset Elementary, La Mirada Elementary, San Ysidro High School, Nestor, Smythe Avenue Elementary, and George Nicoloff Elementary classrooms have air filtration systems installed. • San Ysidro school district secures and operates 100% ZE school buses and has charging infrastructure to in place to support ZE bus operations. • significantly increase vegetation barriers and trees on school grounds.		
Partners & Roles		
Leading ***SDAPCD- Office of Environmental Justice:*** Coordination with School District; Development of informational materials. ***San Ysidro School District:*** Apply for funds; Implementation of Program(s).	**Supporting** ***SDAPCD- Incentives:*** Identify funds; Administer distribution of funds	

Community Care//Strategy 2 Reduce indoor residential exposure to air pollution.	**Type** Incentives	**Timeline** Short-Term (1-3 years)
Actions 1. Develop and implement a residential air filtration and air monitoring program for residences of the International Border Community. 2. Develop popular education materials on how to best reduce air pollution from indoor sources. 3. Work with the City and County of San Diego and non-governmental partners to direct people to resources for solar, weatherization, and transitioning to electric from gas appliances, also known as building decarbonization (i.e., heat pumps, furnaces, stoves, fireplaces, etc.). 4. Support opportunities for workforce development programs to support building decarbonization (i.e., solar installers, appliance installers, electricians, plumbers, construction workers, repair people, etc.).		
Metrics • 1,000 households have received and are operating air filtration and air monitoring systems in their home. • Development and distribution of popular education materials and resources to 1,000 households. • Fund local workforce development programs.		

Partners & Roles	
Leading ***SDAPCD- Office of Environmental Justice:*** Coordination with local CBOs. Development of popular education materials. ***Local CBOs:*** Implementation of a program.	**Supporting** ***SDAPCD- Incentives; CARB:*** Identify funds and administer distribution of funds. Work with CARB to apply CAP Incentives to fund workforce development projects. ***City of San Diego; County of San Diego:*** Direct people to resources for solar, weatherization, and transitioning to electric from gas appliances, also known as building decarbonization.

Community Care//Strategy 3 Increase SDAPCD's presence in the International Border Community.	**Type** Operational; Compliance; Outreach & Engagement	**Timeline** Mid-Term (3-5 years)

Actions

1. SDAPCD to seek a funding model (i.e., permitting fees, compliance fees, etc.), outside of dedicated environmental justice funds from the AB 617 program, to sustain increased active presence in Environmental Justice communities and integrate this focus as part of their standard operating procedures.
2. Closely monitor areas of concern and non-compliant sources (areas of concern can be identified through the IBCSC or through our complaint program).
3. Increase community outreach, education, and engagement about SDAPCD generally and the air quality complaint process through workshops, trainings, community events, place-based social media, etc.

Metrics

- Implementation of a funding model to support SDAPCD's increased active presence in Environmental Justice Communities and incorporate environmental justice principles in standard operations.
- Compliance to meet with IBCSC twice a year for the next 5 years to receive feedback on air quality issues of concern, share what has been documented within those six months from the complaint program, and share what actions have been done in response to those complaints.
- Annually for the next five years intentionally connect with San Ysidro and Otay Mesa residents at least four times per year (i.e., table at three community events, provide community workshops/trainings, and post in place-based social media, present at a local school).

Partners & Roles	
Leading ***SDAPCD- Compliance + Permitting:*** Meet with CSC. Follow up on complaints and issues identified by CSC. ***SDAPCD- Office of Environmental Justice:*** Coordinate and facilitate CSC meetings. Conduct community outreach and education. Development of popular education materials (information that is accessible and meaningful for the community) for outreach and education.	**Supporting** L***ocal CBOs:*** Identify and invite SDAPCD to connect with the community at events, meetings, etc. ***SDAPCD:*** Identify funding opportunities and implement funding models to support increased presence of SDAPCD in the community.

Community Care//Strategy 4 Reduce residential exposure to air pollution.	**Type** Advocacy	**Timeline** Mid-Term (3-5 years)
Actions 1. Coordinate air quality strategies and goals in the CERP with future San Ysidro and Otay Mesa Community Plan Updates. 2. Support policies, planning, permitting, and community plan updates that enforce a separation of land uses through zoning that can serve as a buffer between freeway, industrial, warehouse uses and residential uses within the community (refer to CA Dept of Justice Sept 2022 Warehouse Projects: Best Practices and Mitigation Measures to Comply with CEQA).		
Metrics • Monitoring of projects and advocacy efforts deployed on an as needed basis to ensure buffers are established between residential uses and freeways, industrial operations, and warehouses.		
Partners & Roles		
Leading ***City of San Diego:*** Provide updates to IBCSC and SDAPCD of any changes to policies, planning, and community plans that may impact land use and zoning that may impact the health or quality of life of community members. The City will share with IBCSC how they can sign up for permitting updates.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Coordinate with the City of San Diego. Track projects, permitting, policies, and planning processes.* ***SDAPCD- Planning:*** Review projects and planning efforts and provide comment letters. Conduct CEQA Review.*	

Community Care//Strategy 5 Reduce exposures for sensitive receptors within 500 feet of freeways, warehouses, and industries.	**Type** Advocacy	**Timeline** Long-Term (5+ years)
Actions 1. Support community request for Caltrans to develop buffers (vegetative/walls) along the State Highway System where possible, particularly adjacent to schools, healthcare facilities, daycares, parks, and homes). 2. Support new policies that require all new housing and other sensitive receptors (i.e., daycares, health & medical facilities) to install landscape buffers (refer to CARB's Air Quality and Land Use Handbook & indoor air filtration systems). 3. Advocate for low-emission corridors near sensitive populations in San Ysidro and Otay Mesa.		
Metrics • Buffer (vegetation/wall) along the freeways adjacent to at least one school. • A policy passed at the City-level that requires landscape buffers near housing and sensitive receptors. • Establishment of a low-emissions corridor.		

Partners & Roles	
Leading ***Caltrans:*** Support and work with local school district and others to put vegetation barriers on Caltrans right of way to mitigate air pollution exposure. ***City of San Diego:*** Provide updates to IBCSC and SDAPCD of any policies, planning, and community plans that may impact land use and zoning that may impact the health or quality of life of community members. Support and work towards policies to install landscape buffers and establish a low-emissions corridor (which could include establishment of truck routes).	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Coordinate with the City of San Diego and Caltrans. Track projects, permitting, policies, and planning processes.* ***SDAPCD- Planning:*** Provide comment letters of support. Establish this strategy as a community-identified priority and identify funding (AB 617 or elsewhere). *

Community Care//Strategy 6 Plan for and integrate Urban Greening, prioritizing locations near schools, parks, senior centers, healthcare facilities, daycares, etc.	**Type** Incentives, Advocacy, Community Outreach & Engagement	**Timeline** Mid-Term (3-5 years)

Actions

1. Pursue grant funding opportunities to fund urban greening projects (i.e., street trees and vegetation).
2. Support the creation and prioritization of urban green spaces (i.e., street trees and vegetation) near sensitive receptors which include adjacent to schools, parks, senior centers, and medical facilities and any other area where there may be people with elevated health risk to poor air quality (children, elderly, chronically ill, etc.).
3. Work with the City's arborist to identify tree species that are good for air quality filtration to plant in San Ysidro and Otay Mesa, particularly near where there may be people with elevated risk to poor air quality (children, elderly, chronically ill, etc.).

Metrics

- Increase trees in areas that prioritize people that are most vulnerable to air pollution (i.e., near schools, recreation centers, health centers, senior facilities, etc.) in a quantity that meaningfully improves air quality and protects community members in these spaces.

Partners & Roles	
Leading ***City of San Diego:*** Work with IBCSC to identify locations of where to prioritize tree planning. Plant and maintain trees.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Coordinate with the City of San Diego and School District. ***SDAPCD- Incentives:*** Identify potential funding from AB 617 or other grant opportunities to fund urban greening efforts led by the City of San Diego, CBO, or school district. ***San Ysidro School District:*** Coordinate with City of San Diego and SDAPCD. Plant and maintain trees on campus.

<table>
<tr><td colspan="2">Community Care//Strategy 7
Fund and implement school flag programs.[25]</td><td>Type
Program, Incentives</td><td>Timeline
Short-Term
(1-3 years)</td></tr>
<tr><td colspan="4">Actions
1. Work with Willow Elementary, San Ysidro Middle School, Sunset Elementary, La Mirada Elementary, Smythe Avenue Elementary, and George Nicoloff Elementary to institute a school flag program which would notify teachers, students, staff, and parents about the daily air quality and what actions should be taken to protect public health.
2. Identify funding and community partners to support in the administration and community education for a flag program in San Ysidro schools.
3. Identify local champions (i.e., teachers, parents, students, etc.) who can lead the flag program in each participating school.
4. Seek grants and other funding opportunities to fund this program.
5. Work with the schools to set up sensor-based monitoring onsite to help inform daily flag action.</td></tr>
<tr><td colspan="4">Metrics
• Funding identified and secured.
• At least two schools participating in the program.
• Set up sensor-based monitoring onsite.</td></tr>
<tr><td colspan="4">Partners & Roles</td></tr>
<tr><td colspan="2">Leading
San Ysidro School District: Identify local champions at the school to administer the program (i.e., PTA, teachers, parents, etc.). The local schools will be the lead implementers and oversee the program day to day. Finds ways to coordinate with the San Ysidro Fire Station (site of an air quality monitor) to implement the program.

SDAPCD- Office of Environmental Justice: Introduce the idea to the schools and provide support and coordination with the schools.</td><td colspan="2">Supporting
SDAPCD- Incentives: Identify potential funding from AB 617 or other grant opportunities to fund implementation of a flag program.

SDAPCD- Monitoring: Provide sensor-based monitors and training on how to install and use them.</td></tr>
</table>

Community Care//Strategy 8 Expand sensor-based monitors to track PM2.5.	**Type** Monitoring	**Timeline** Short-Term (1-3 years)

Actions

1. Seek new opportunities and work with the IBCSC to create an air quality sensor-based monitor network to:
   - Provide real-time PM2.5 data;
   - Supplement the PM2.5 monitoring network in San Ysidro and Otay Mesa and cover a larger area in the community, prioritizing locations identified by the IBCSC, areas where the public spends a significant amount of time (e.g., schools and residential areas) and areas close to sources of fugitive dust and passenger and heavy-duty vehicles;
   - Co-locate air quality sensors with reference PM2.5 monitor at one of SDAPCD's air monitoring stations to verify sensors performance prior to deployment and implement a data calibration and correction protocol to enhance sensor PM2.5 data quality after deployment;
   - Provide near real-time PM 2.5 and wind data and inform community members of PM 2.5 levels in the International Border Community, and assess how levels compare to Federal and/or State ambient air quality standards; and
   - Track the concentration trends of PM2.5 levels over time to help determine the effectiveness of emission reduction strategies.

Metrics

- Purchase and testing through co-location of sensor-based monitors.
- Recruitment and training of CBOs and community members on how to install and interpret the data.
- Locate and install 5-10 sensor-based monitors in the community.

Partners & Roles	
Leading ***SDAPCD- Monitoring:*** Provide sensor-based monitors and training on how to install and use them. Be available to provide troubleshooting support. ***Local CBOs (TBD):*** Install and manage sensor-based monitors. Recruit and coordinate with participating community members.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Identify potential funding from AB 617 or other grant opportunities to fund the program. Coordinate with local CBOs.

Community Care//Strategy 9 Develop a plan to quantify and prioritize the community health risks from stationary and mobile sources (cumulative health risks) of air pollutants.	**Type** Research	**Timeline** Short-Term (1-3 years)

Actions

1. Determine, in consultation with the Community Steering Committee and CARB, how the health risk analysis can be conducted and applied.
2. In consultation with the Community Steering Committee, develop goals and objectives on how to utilize the health risk analysis.
3. Based on the goals and objectives, develop a work plan that articulates and evaluates the inputs, processes, deliverables, and timelines needed in quantifying and prioritizing the health risks and establish options considering various timeframes and resources needed, including the need and scope of any subsequent updates to the prioritization.
4. Determine how the planning emission inventories developed for this Community Emissions Reduction Program can be utilized to quantify the health risks.

Metrics • Complete the cumulative health risk analysis.	
Partners & Roles	
Leading ***California Air Resources Board (CARB):*** The cumulative health risk analysis will be based on CARB's California Air Toxics Assessment (CATA), which will provide community level health risks based on 2017 conditions (emissions and meteorology). Summary data and detailed shapefiles of the data will be available through the online CATA data portal. CARB will work with the CSC to understand what the health risk analysis can and cannot be used for.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Coordinate with the various agencies and provide updates to the CSC in a manner that is meaningful and accessible. ***SDAPCD- Engineering:*** Coordinate with CARB to provide emissions data they may need for their analysis. ***State of Baja California:*** Coordinate with CARB to provide emissions data they may need for their analysis.

Community Care//Strategy 10 Continue to identify opportunities to fund mitigation and emission reduction projects that protect community health and improve quality of life.	**Type** Incentives, Community Outreach	**Timeline** Continuous
Actions 1. IBCSC to work with SDAPCD to identify community benefiting projects that can be considered under the Supplemental Environmental Project (SEP) Program list of approved projects.[26] Some of these projects are already included in the strategies and actions of the CERP such as, urban greening, school and residential air filtration systems, zero emission school busses and infrastructure, etc.		
Metrics • Projects identified and shared. • Implementation of projects in the community (if applicable) and annual updates provided.		
Partners & Roles		
Leading ***SDAPCD-Compliance:*** Once per year check in with CSC to hear their community benefiting project ideas and provide updates on SEP projects that may be happening in their communities.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Share what has been said at CSC meetings and in the community to ensure these priorities get on the SEP list. Provide opportunities for the Compliance Division to hear directly from CSC and community members.	

PASSENGER VEHICLES

Goal: Reduce exposure to emissions from passenger vehicles at the border and throughout the community.

Passenger Vehicles//Strategy 1 Advocate for policies, plans, and actions that support the reduction of emissions from passenger vehicles.	**Type** Advocacy	**Timeline** Long-term 5+ years

Actions

1. Support local, regional, and state plans that reduce vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions throughout the community.
2. Support transit, pedestrian and bicycle infrastructure as a funding priority for local, regional and state transportation authorities.
3. Advocate for a Transit Demand Management (TDM) ordinance throughout the San Diego region with the intention to provide greater access to healthy foods, healthcare, recreational spaces, etc.[27]
4. Advocate for Mexican and U.S. authorities to perform inspections and enforce laws on passenger vehicles emissions.
5. Implement pedestrian and cyclist amenities which may include installation of shade and cool zones, landscaping to offset the emissions from cars, seating, lighting, sidewalks, crosswalks, bike lanes, ADA accessible, etc.

Metrics

- Regional Plan shows reduction in VMT, particularly for San Ysidro and Otay Mesa.
- Develop and pursue implementation of a Regional TDM ordinance.
- Early transition to ZE transit buses.
- Increase participation rate of smog inspection program in Baja California, as well as enforcement of standards in the U.S. and Mexico.

Partners & Roles

Leading

SANDAG: Support a regional Plan that shows reduction in VMT, particularly for San Ysidro and Otay Mesa.

City of San Diego and County of San Diego: Pass a TDM policy(ies), as stated in the City's Climate Action Plan.

MTS: Support and fund early transition to ZE transit buses.

State of Baja California: Implement passenger vehicle emissions enforcement.

California Air Resources Board (CARB): Develop and implement amendments to the gray market vehicles (used cars) regulation.

Supporting

SDAPCD- Office of Environmental Justice: Coordinate with public agencies and provide opportunities for these agencies to advise the CSC regarding their progress.

SDAPCD- Planning: Provide letters of support. Track and participate in planning and policy development activities.*

Passenger Vehicles//Strategy 2 Support and fund incentive programs to reduce emissions from passenger vehicles and provide for zero emission alternatives.	**Type** Incentives	**Timeline** Mid-Term 3-5 Years

Actions

1. Advocate for CARB's State Implementation Plan (SIP) actions that support the reduction of emissions of passenger vehicles or require zero emission alternatives.
2. Support and implement efforts such as SD Clean Cars for All Vehicle rebate programs for cleaner vehicles and ensure targeted outreach to people living in San Ysidro and Otay Mesa.
3. Implement EV charging infrastructure incentive program.
4. Explore, promote, and implement incentives for ZEV crossing the border.
5. Support for early transition to ZE transit buses.
6. Support the development of ZE and electric vehicle (EV) strategies for the region including opportunities in the International Border Communities.
7. Support a dedicated lane for zero-emission border-crossing vehicles and explore with CBP a similar solution for southbound traffic.
8. Support the implementation of an EV car sharing network. (County of San Diego Regional Decarbonization Framework).
9. Develop a ZEV strategy for the states of California, Baja California, and Baja California Sur that:
    - Provides an assessment that identifies major infrastructure, policy, and funding challenges to deploy ZEV infrastructure in the binational megaregion.
    - Proposes the implementation policies and strategies, potential projects, and funding opportunities for transitioning passenger and commercial vehicles to ZEV technologies.
    - Identify high priority alternative clean corridors within California, Baja California, and Baja California Sur.
    - Identify and recommend common ZEV charging/fueling station site criteria and ZEV standards for both passenger vehicle and freight.
    - Assesses the tri-state benefits for transitioning to ZEV.
    - Develop ZEV recommendations for an alternative fuel corridor the Otay Mesa East/Mesa de Otay II Port of Entry Project.

Metrics

- At least 10% of the vehicle rebates offered in the region go to residents in San Ysidro and Otay Mesa.
- 100 electric bikes purchased through subsidy programs in San Ysidro and Otay Mesa.
- 10 EV chargers installed in San Ysidro and Otay Mesa.

Partners & Roles

Leading	**Supporting**
SDAPCD- Incentives: Administer CC4A. Support other agencies' EV charger programs.* Create and administer bike and EV charger programs.* ***SANDAG:*** Plan and implement an EV charger program. ***City of San Diego:*** Support the adoption of eclectic vehicles through infrastructure improvements (i.e., EV chargers, electric grid updates, etc.).	***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress.

Passenger Vehicles//Strategy 3 Improve transportation circulation in San Ysidro to reduce emissions from passenger vehicles.	**Type** Transportation, Advocacy	**Timeline** Long-Term 5+ Years

Actions

1. Evaluate and alter traffic routes at pick up and drop off areas near the border to reduce emissions from passenger vehicles and public health impacts.
2. Manage existing on-street parking spaces through time limits and/or pricing.
3. Have no-idling zones at parking locations near the border and near schools.
4. Coordinated Traffic signals to enhance the flow of traffic particularly at Dairy Mart, Calle Primera, and San Ysidro Boulevard.
5. Allow for longer term parking options connected to transit to make it easier to cross into Mexico without a passenger vehicle.
6. Evaluate and address the impacts of border traffic on local streets (i.e., the onramp to Mexico from Camino De La Plaza) and determine the best course of action to reduce idling vehicles on City streets.
7. Evaluate transportation planning around Plaza de las Americas and support recommendations that improve traffic flow, reduce VMT, support walking, biking, and taking public transit, and reduce emissions from passenger vehicles.

Metrics

- Improved circulation (local roadway level of service) and reductions in PM2.5 and NOx emissions from passenger vehicles (significantly reducing health risk by limiting exposure to emissions).

Partners & Roles

Leading	**Supporting**
City of San Diego, SANDAG, Caltrans: Evaluation, planning, engineering, pursue funding, implementation.	***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress. ***SDAPCD- Planning:*** Provide letters of support for these actions. Active participation in planning efforts.* ***SDAPCD- Monitoring:*** Establish PM2.5 and NOx baselines near sensitive receptors and main thoroughfares and monitor emissions annually.

Passenger Vehicles//Strategy 4 Enhance pedestrian, bicyclist, and transit rider efficiency and experience crossing the border and reduce passenger vehicle crossings and emissions.	**Type** Transportation, Advocacy	**Timeline** Long-Term 5+ Years

Actions[28]

1. Enhanced/Priority Processing for Pedestrians and Cyclists: A) Prime Time Crossing: Priority crossings for pedestrians and cyclists during midday period to avoid heat exhaustion while waiting to cross the border. B) Thermal/Biometric and/or MAC Address Matching Detectors: Enables efficient counting of pedestrians and cyclists and control over tolls; may be paired with address matching wireless technology to verify pedestrians/cyclists entering/exiting the POE without having them stop for processing. C) Smart Pathway: Identity verification technology may be installed, such as thermal/biometric detectors and MAC address matching within a physical passageway to facilitate no-contact verification. Pedestrians/cyclists do not need to stop to cross the border. Ideally, this would also reduce the walking distance required to cross the border.
2. Pre-Crossing Check-In/Read POVS: A) Pre-Check In via App: Providing an app or digital platform to allow passengers to check-in ahead of time and providing a time window for crossing may help distribute demand and avoid longer wait times. Such a system would operate in both directions: north to south and south to north. Another option includes gantry readings of passengers approaching a POV prior to crossing. B) Pre-Check-In via Border Kiosks: Passengers may check-in at a kiosk at a smart mobility center to reserve a crossing time and remind them of any documents they need. Real-time signs indicate when to depart the smart mobility center to begin crossing to help manage demand.
3. Daily Commuter Pass: Pedestrians who cross the border daily or frequently for work purposes may apply for prequalification (low or subsidized fee for those under an income threshold). This strategy may complement pre-crossing check-in and goes hand in hand with Enhanced Priority Processing.
4. Pedestrian and Cyclist Amenities/Benefits: Amenities may include installation of shade and cool zones, landscaping to offset the emissions from cars, charging stations and seating, lighting, safety hotline, and patrolling officers to increase perception of safety at the POEs. All facilities would be ADA accessible. Real-time information and signage placed at key points can enhance wayfinding and keep travelers informed of travel and wait time changes.
5. Dedicated Bicycle Lanes/Network: Dedicated bicycle lanes at crossing facilities to bypass car traffic and enable priority processing. This may include working with municipalities to expand bike lanes that connect to surrounding communities in San Ysidro and Otay Mesa.
6. Smart Mobility Center/Mobility Hub: Multimodal transportation hub with amenities for travelers and to facilitate seamless travel connections. Primary amenities include, but are not limited to, secure bicycle storage, cross border bike share, transit and mobility services, internet access, travel information desks, clean restrooms, and Border Kiosks. Secondary amenities, include but are not limited to, park and ride facilities (with reservation options), safe pick up and drop off locations for shared mobility options (including scooters and bicycles), safe drop off locations for travelers dropped off in passenger vehicles (including personal vehicles or taxis), rental cars, coffee shops, duty free shopping, and restaurants. All these amenities would be ADA accessible.
7. Cross Border Transit Service: A transit service that crosses the border in both directions with pre-screened travelers (ideally in a Trusted Traveler Program). Partnerships with a private entity could be advantageous. This service may also be privately operated; company-run shuttles may carry employees across the border. A Mobility-as-a-Service (MaaS) model is also an option.
8. Integrated Traveler Information: Interfacing with broadly utilized smartphone apps (e.g., Google apps) for better trip planning using reliable real time wait time and travel time data for all modes (pedestrians, cyclists, vehicles, transit, freight) can help ease traveler uncertainty.
9. Dynamic Lane Operations: Lanes for various modes are adjusted dynamically based on historical crossing trends and current needs for both northbound and southbound to accommodate any configuration of modes. A designated HOV lane for transit may help make a cross border transit service a more competitive option.

10. Bilingual Border Education Program: Bilingual binational educational materials and information developed and made available to border crossers through a variety of media/means such as websites, social media, electronic information displays in queue lines, FAQs, wayfinding details, and overview of border crossing processes, procedures, expectations, and links to useful resources. For broader impact, flyers, printed handouts, or supporting materials could be made available. Materials could focus on key border objectives such as promoting mode shifts, making crossers aware of mobility and connectivity opportunities, offering continuing education opportunities, linking community programs in the border region, and providing options for more interactive community feedback.
11. Work with Mexican authorities to develop an incentive program to encourage Tijuana residents to use transit or carpool and work with U.S. authorities to do the same with U.S. residents.
12. Support and incentivize bicycle use to cross the border and incorporate into existing local and regional bicycle networks.
13. Support increased efficiency and staffing of CBP at the border to decrease wait times.
14. Conduct a study to evaluate student crossings to determine the best strategies to reduce passenger vehicle reliance.
15. Explore the establishment of a bus service from Tijuana to the U.S. that provides direct routes to various cities in the US where transportation data has indicated that many people are headed. Explore programs with anchor institutions such as businesses and schools that provide such a bus service for their employees or students.

Metrics

- Reduction in average passenger vehicle volumes for cross border trips
- Increase in pedestrian and bus mode share for cross border trips
- Reduction in average border wait times

Partners & Roles

Leading	Supporting
SANDAG; Caltrans: Evaluation, planning, engineering, pursue funding, implementation.	***State of Baja; City of San Diego; Customs and Border Patrol; U.S. General Services Administration:*** Coordination and collaboration with SANDAG and Caltrans. ***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies to provide updates to the CSC regarding their progress. ***SDAPCD- Planning:*** Provide letters of support for these actions. Active participation in planning efforts as resources allow.

IBCSC Meeting

Passenger Vehicles//Strategy 5 Improve transit services, operations, programs, and amenities to make transit a more viable alternative to passenger vehicle use for people getting to and from the border.	**Type** Transportation, Advocacy	**Timeline** Long-Term 5+ Years

Actions

1. Mobility Hubs: Implement near-term improvements to the San Ysidro Transit Center to enhance access, safety, and efficiency, while developing long-term investments in a future San Ysidro Mobility Hub to accommodate more robust mobility options (i.e., new rail and bus services) to ultimately induce mode shift away from personal vehicle travel through the port of entry. Longer term solutions integrate shared mobility services, transit supportive land uses, and supporting technology to increase mobility options and enhance equity, safety, and accessibility.
2. Rapid Bus Service: New Rapid bus service connecting the border to the rest of the region (e.g., between San Ysidro and Downtown San Diego).
3. Improve Existing Rail Service: e.g., Blue Line improvements to enhance accessibility, travel times/speeds, capacity, and frequencies for the most constrained segments of the Blue Line corridor. This would also include grade separations at key locations such as 28th St, 32nd St, E St, H St, Palomar St, and Blue/ Orange Track Connections at 12th/ Imperial
4. Implement New Rail Service: e.g., Purple Line to connect between the border, National City, City Heights, Kearny Mesa, and Sorrento Mesa.
5. Cross border Trolley: Extension of Blue Line Trolley service 1-mile into Tijuana. Coordinated customs inspection processing for vetting traveler information in advance of trip.
6. Increase frequency of transit service to 10 mins during evening and weekend service at the Border in San Ysidro. (County of San Diego Regional Decarbonization Framework)
7. Provide real-time transit information.[29]
8. Flexible Fleet Services: Implement flexible fleet programs to improve first/last mile connections in the border community (e.g., a free electric shuttle service to key locations to and from the border). This program could also supplement gaps in school shuttle and bus networks, business and work shuttles, shopping district shuttles, etc. Implementation could include public subsidies and public-private partnerships.[30]
9. Cross border Transit Fare Incentives: Program to coordinate transit fare systems in both San Diego (via MTS) and Tijuana (via SITT) to incentivize use of transit by cross border travelers. Fares would be discounted (i.e., reduced price, free transfer onto either system) for trips taken via the SITT system and MTS system on the same day and/ or specified time.
10. Electrify transit equipment and vehicles.[31]

Metrics

- Reduction in average travel times between the border and key regional destinations
- Increased transit service options, performance, and accessibility
- Reduction in average passenger vehicle volumes for cross border trips
- Increase in pedestrian and bus mode share for cross border trips

Partners & Roles

Leading	**Supporting**
SANDAG: Planning, engineering, pursuing funding, implementation. ***MTS:*** Planning, engineering, secure funding, implementation.	***City of San Diego, County of San Diego, and State of Baja California:*** Coordination and collaboration with SANDAG and MTS. ***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress. ***SDAPCD- Planning:*** Provide letters of support for these actions. Active participation in planning efforts as resources allow.*

HEAVY-DUTY VEHICLES

Goal: Reduce emissions and emission exposure from heavy-duty trucks traveling to and from warehouses in Otay Mesa and beyond to protect the health of people living along truck routes (i.e., California State Route 905) on both sides of the border.

Heavy-Duty Vehicles//Strategy 1 Advocate for CARB's State Implementation Plan (SIP) actions that support the reduction of emissions from heavy-duty vehicles or require zero emission alternatives.	**Type** Advocacy, CARB Rulemaking	**Timeline** Mid-Term 3-5 Years
Actions 1. Transport Refrigeration Unit Regulation Part 2: CARB staff are developing requirements to transition diesel powered TRUs to zero emission technology in two phases. Part 1 consists of amendments to the TRU Airborne Toxic Control Measure, which the Board approved at its February 2022 meeting. The amendments include requirements for the transition of diesel-powered truck TRUs to zero emission, a particulate matter emission standard for newly manufactured non-truck TRUs, lower global warming potential refrigerant, facility registration and reporting, expanded TRU reporting and labeling, and fees. CARB plans to develop a subsequent Part 2 regulation to require zero-emission trailer TRUs, domestic shipping container TRUs, railcar TRUs, and TRU generator sets for future Board consideration. 2. Advanced Clean Fleets Regulation: CARB has adopted 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 (marine port and railyard) applications.		
Metrics • Implementation of CARB's SIP actions to reduce emissions from heavy-duty vehicles.		
Partners & Roles		
Leading ***California Air Resources Board (CARB):*** Rule development and implementation.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Coordinate with CARB and provide opportunities for them to provide updates to the CSC regarding their progress. Provide letters of support for these actions.	

Heavy-Duty Vehicles//Strategy 2 Implement programs that support efficiency in operations at the Ports of Entry to reduce wait times and reduce emissions from heavy-duty trucks.	**Type** Transportation, Advocacy	**Timeline** Long-Term 5+ Years
Actions 1. [32]Flexible hours of operation responding to demand: Implement a system where customs inspection agents in Mexico and the U.S. could define flexible hours of operation by season. Working with shippers and carriers, identify periods where demand is high and require expanding hours of operation. 2. Commercial vehicle appointment window system. 3. Non-intrusive inspections into Port of Entry operations - Coordination with law enforcement and other agencies.54F 4. Preclearance to accelerate processing time for trucks in coordination with other agencies/law enforcement. 5. Expanded hours for California Highway Patrol/Commercial Vehicle Enforcement Facility inspections. 6. Pilot programs for streamlining commercial vehicle operations for reducing wait time.		

Metrics
- Full implementation of programs and infrastructure listed.

Partners & Roles

Leading	Supporting
Caltrans: Coordinate with CHP and CBP to support program development, secure funding, implementation. ***California Highway Patrol:*** Program development, secure funding, implementation. ***Customs and Border Patrol:*** Program development, secure funding, implementation.	***SANDAG:*** Coordination and collaboration with Caltrans, CBP, and CHP. ***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress. ***SDAPCD- Planning:*** Provide letters of support for these actions. Track projects/programs.*

Heavy-Duty Vehicles//Strategy 3 Invest in and install infrastructure and technology that supports the operation of zero emission heavy-duty vehicles and supports efficiency in operations at the Otay Mesa Port of Entry to reduce wait times and reduce emissions from heavy-duty trucks.	**Type** Transportation, Advocacy	**Timeline** Long-Term 5+ Years

Actions
1. [33]Dynamic Lane Operations Based on Demand and With Appointment System (freight): Provide the POE with inspection lanes at CBP primary that could be used for different trip types (FAST, Regular, Empty, UCP). These lanes will operate based on demand during the day and could also be used by the reservation/appointment system. Variable dynamic signs and other means of communication will provide information to trucks en-route to the POE on the status and number of the lanes in operation.
2. Build zero emission truck charging/parking/staging infrastructure in the industrial area of Otay Mesa.
3. Commercial Vehicle Enforcement Facility (CVEF) modernization: Improvements to the CVEF to reflect General Service Administration's proposed Otay Mesa POE Modernization Project.
4. Wireless electric charging for trucks in queue.
5. Border Wait Times - SR-11 tolling equipment, and Regional Border Management System.
6. Provide incentives for businesses to purchase cargo bikes.

Metrics
- Full implementation of programs, technology, and infrastructure listed.

Partners & Roles

Leading	Supporting
Caltrans: Develop infrastructure and coordinate with CHP and CBP to support program development, secure funding, implementation. ***California Highway Patrol:*** Program development, secure funding, implementation. ***Customs and Border Patrol:*** Program development, secure funding, implementation.	***SANDAG:*** Coordination and collaboration with Caltrans, CBP, and CHP. ***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress. ***SDAPCD- Planning:*** Provide letters of support for these actions. Track projects/programs.*

Heavy-Duty Vehicles//Strategy 4 Support activities and partnerships that bring in funding to the International Border Communities to advance the implementation of infrastructure, technology, and zero emissions heavy-duty vehicles.	**Type** Incentives, Advocacy	**Timeline** Mid-Term 3-5 Years
Actions[34] 1. Toll discounts for Zero Emission trucks. 2. Support private truck parking site development/Zero Emissions charging through grant support and establishment of public-private partnerships. 3. Identify new sources of funding, including new fees, to promote zero emission trucks and other emissions reduction opportunities at the international port.		
Metrics • Establishment of a temporary program for toll discounts for ZE trucks transitioning in advance of the state mandate. • Reach out to at least 30% of trucking companies operating in San Ysidro and Otay Mesa to let them know about incentive funding and at the discretion of the IBCSC fund a percentage of the transition to ZE heavy-duty trucks. • Coordinate with SANDAG to identify appropriate sites for EV charging infrastructure for ZE heavy-duty trucks operating in the Otay Mesa and San Ysidro area and at the discretion of the IBCSC.[35]		
Partners & Roles		
Leading ***SDAPCD- Incentives:*** Use existing AB617 funding to support the transition to ZE trucks. Provide letters of support for these actions. ***SANDAG:*** Explore and identify funding opportunities to subsidize a portion of ZE heavy duty infrastructure.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress.	

Heavy-Duty Vehicles//Strategy 5 Develop and advocate for rules or other strategies that reduce emissions from indirect sources, including heavy-duty vehicles, operating in Otay Mesa and San Ysidro.	**Type** Rule Development, Advocacy	**Timeline** Mid-Term 3-5 Years
Actions 1. [36]Develop an Indirect Source Rule and/or other enforceable indirect source control strategies to reduce emissions from heavy-duty trucks in Otay Mesa and San Ysidro. 2. Advocate to the City of San Diego City Council (and or County Board of Supervisors) for a moratorium on the construction of new warehouse facilities in Otay Mesa until 75% of fleets in San Diego (city or county) are electrified.		
Metrics • Development of Indirect Source Rule and/or other enforceable indirect source control strategies to reduce emissions from heavy-duty trucks. • Through the implementation of an of Indirect Source Rule and/or other enforceable indirect source control strategies, meaningfully reduce NOx and Diesel Particulate Matter (DPM in San Ysidro and Otay Mesa to reduce emissions from this source and improve public health and quality of life outcomes.		
Partners & Roles		
Leading ***SDAPCD -*** Rule Development: Development of a rule/or other enforceable indirect source strategies.	**Supporting** ***SDAPCD - Rule Development:*** Development of a rule/or other enforceable indirect source strategies.	

Heavy-Duty Vehicles//Strategy 6 Develop partnerships to conduct research on actions that can lead to reducing emissions from heavy-duty vehicles and improve health outcomes for the International Border Community.	**Type** Research	**Timeline** Short-Term (1-3 years)

Actions

1. IBCSC to pursue collaborative partnerships with a university and/or research institutions, and local utilities, in consultation with the California Air Resources Board to develop an Electric Vehicle (EV) Truck charging needs assessment and strategy for Otay Mesa and San Ysidro,
2. IBCSC to pursue collaborative partnerships with SANDAG, Caltrans, and CARB to prepare a feasibility study to determine needs and potential locations of truck parking facilities. This feasibility study might explore potential public-private partnership opportunities.
3. IBCSC to pursue collaborative partnerships with SDAPCD Rule Development, in consultation with CARB to identify warehouses in San Ysidro and Otay Mesa, their square footage, and amount of emissions from heavy-duty vehicles traveling to and from the warehouses to inform the development of an Indirect Source Rule.
4. IBCSC to pursue a collaborative partnership with a university and/or research institutions and consult the California Air Resources Board to research heavy-duty trucks crossing the border each day to help inform the implementation and better understand the health and air quality impacts of the Advanced Clean Fleets Rule. The research should include the following:
   - Number of heavy-duty trucks crossing daily;
   - Details of the owners and operators of the heavy-duty trucks (i.e., large company, sole proprietors, who are they hired by; etc.);
   - Where are they traveling to and how far from their original destination; and
   - Type of heavy-duty truck and emissions associated with the vehicle, etc.

Metrics

- Identification of a university and/or research institutions partner.
- Completion of a research study and a set of clear recommendations.

Partners & Roles

Leading	**Supporting**
University and/or research institutions TBD: Lead research partner.	***CARB:*** Support with relevant available data and information. ***SDAPCD- Office of Environmental Justice:*** Coordinate with CSC to help inform research questions, and provide feedback on findings and recommendations. ***SDAPCD- Rule Development; SANDAG; Caltrans; CHP; CPB:*** Support with applicable research information.

Heavy-Duty Vehicles//Strategy 7 Support education to businesses and truck drivers and other relevant support services to assist with applying for incentives and generally the transition to zero emission heavy-duty trucks and efficient port of entry operations.	**Type** Community Outreach & Engagement, Incentives	**Timeline** Short-term & Continuous
Actions 1. Training and outreach about zero emission freight technology (e.g., workshops, sources, truck sharing program) to help carriers become familiar with the technology.[37] 2. Connect the community and trucking industry to funding opportunities to advance the deployment of heavy-duty on-road electric trucks. 3. Support opportunities for workforce development programs to support the transition to electric trucks (i.e., drivers, mechanics, charging infrastructure installers, etc.). 4. SDAPCD connects with CalFleet Advisors to ensure they share with truck drivers and trucking companies information about SDAPCD's incentive programs as well (and vice versa).		
Metrics • Conduct two workshops/outreach events per year to truck drivers.		
Partners & Roles		
Leading ***SDAPCD- Incentives:*** Development of informational materials. Conduct two workshops per year.	**Supporting** ***TruckNet:*** Support with advertising the workshops. Host workshops on site. ***SDAPCD- Office of Environmental Justice:*** Support with coordination, development of informational materials, and workshops. ***CARB; SDAPCD-Incentives:*** Work with CARB to apply CAP Incentives to fund workforce development projects.	

Heavy-Duty Vehicles//Strategy 8 Increase the number of inspections at the CHP station at Otay Mesa or surrounding areas.	**Type** Compliance	**Timeline** Mid-Term 3-5 Years
Actions 1. Identify funding opportunities (i.e., CARB request, new sustainable funding models, fees, etc.) to SDAPCD compliance capacity for more mobile inspections. 2. Coordinate with CHP, SDAPCD, and CARB to increase inspections of heavy-duty trucks in Otay Mesa to ensure compliance. 3. Develop a virtual work group with truckers and SDAPCD inspectors to identify additional strategies to improve compliance. 4. Partner with CARB, Caltrans, and CHP to install stationary remote sensing emission and license plate reading technologies that will measure emissions of mobile heavy-duty vehicles. Vehicles identified as high emitters will receive a notice to correct which requires truck owners to provide CARB evidence of compliance. Failure to respond or demonstrate compliance can lead to registration holds.		

Metrics

- Funding opportunities (i.e., CARB request, new sustainable funding models, fees, etc.) to SDAPCD compliance have been secured.
- SDAPCD's Compliance Division to work with CARB staff and IBCSC to increase and determine the appropriate amount of monthly mobile inspections, taking into account the volume of heavy-duty trucks traveling in the International Border communities, to adequately deter and identify heavy-duty trucks out of compliance. Work with CARB to identify funding sources to support SDAPCD inspection staff necessary to inspect and address the volume of heavy-duty trucks in the International Border Communities.
- Secure location and install permanent stationary emission and license plate reading technologies. Track truck counts and results of the inspections and screening.
- Provide updates to CSC regarding progress on an annual basis.

Partners & Roles

Leading	Supporting
S***DAPCD- Compliance:*** Identify funding opportunities. Coordinate with CBP to increase inspections. ***CARB:*** Provide remote sensing emission and license plate reading technologies. Analyze data and follow up with high emitting vehicle owners, taking enforcement action where warranted. Track and monitor results, and report back to CSC of findings and statistics. Work with CalTrans and CHP to find a permanent location for hosting remote sensing emission and license plate reading technologies. ***CHP:*** Support CARB inspectors in coordinated campaigns.	***SDAPCD- Office of Environmental Justice:*** Support CARB in sharing and reporting findings and statistics back to the CSC. Coordinate with Compliance and provide opportunities for this Division to provide updates to the CSC regarding their progress on an annual basis. ***CHP & CARB:*** Coordinate with SDAPCD enforcement to increase inspections.

IBCSC Meeting

OTHER SOURCES

Goal: Reduce emissions from Border Patrol activity on the west-side of San Ysidro, freight trains going through the heart of San Ysidro, the Brown Field Municipal Airport in Otay Mesa and Aeropuerto Abelardo L. Rodriguez in Tijuana, among additional sources.

Other Sources//Strategy 1 Research air quality and health impacts of local airports and sustainability plans of small airports nationally to inform actions.	**Type** Research	**Timeline** Short-Term (1-3 years)
Actions 1. Pursue collaborative a partnership with a university to support the following research to understand air quality and health impacts of airport operations and inform the development of strategies for emission reductions: • emissions from local airports, using monitoring and other techniques, • county sustainability plans for smaller airports to inform potential strategies to address air quality impacts, and • emissions and noise pollution from CBP and military activity at airports.		
Metrics • Identification of a university and/or research institutions partner. • Completion of a research study and a set of clear recommendations.		
Partners & Roles		
Leading ***University TBD:*** Lead research partner.	**Supporting** ***CARB:*** Support with relevant available data and information. ***SDAPCD- Office of Environmental Justice:*** Coordinate with CSC to help inform research questions and provide feedback on findings and recommendations. ***SDAPCD- Monitoring:*** Support and help inform research by sharing applicable monitoring data.	

Other Sources//Strategy 2 Support emission reduction regulations for small aircraft.	**Type** Advocacy	**Timeline** Long-Term 5+ Years
Actions 1. Support the forthcoming rules by the U.S. EPA that phases out the use of leaded aviation fuel nationwide by 2030.		
Metrics • Implementation of the leaded aviation fuel rule and measurable emissions reductions.		
Partners & Roles		
Leading ***EPA- Region 9:*** Lead implementing agency. Provide status updates and notify of opportunities for community involvement.	**Supporting** ***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress. ***SDAPCD- Planning:*** Provides letters of support.	

Other Sources//Strategy 3 Support policies, programs, and actions that reduce emissions from Customs and Border Protection (CBP) operations.	**Type** Advocacy, Compliance	**Timeline** Mid-Term 3-5 Years
Actions 1. IBCSC members and SDAPCD meet with CBP, US Representative, and US Senators to discuss concerns and air quality priorities as it relates to emissions caused by CPB operations. 2. Advocate for policies, programs, and actions that reduce emissions from CBP operations, such as: using ATV's less; institute no idling or revving policies and dust mitigation measures; and encourage the development of a CBP Border sustainability plan to move towards cleaner fuel sources and ZEV.		
Metrics • A deeper understanding of CBP operations, regulations that govern their operations, and opportunities to reduce emissions from this source. • Implementation of compliance and mitigation efforts to measurably reduce emissions from CBP operations.		
Partners & Roles		
Leading ***SDAPCD- Office of Environmental Justice:*** Coordinate with public agencies and provide opportunities for these agencies to provide updates to the CSC regarding their progress. Advocate for policies and programs that reduce emissions from CBP operations. ***Customs and Border Patrol:*** Provide information on current operations and work with SDAPCD on how to mitigate potential air quality impacts.	**Supporting** ***SDAPCD- Compliance; California Air Resources Board (CARB); EPA- Region 9:*** Support in identifying existing local, state, and federal rules and determine current compliance of these rules. ***SDAPCD- Monitoring:*** Use stationary and sensor-based monitoring near sites of concern to establish baseline emissions and analyze monitoring data annually to determine potential changes.	

Other Sources//Strategy 4 Research and evaluate emissions from train operations in San Ysidro.	**Type** Research	**Timeline** Short-Term (1-3 years)
Actions 1. Pursue collaborative partnerships with a university and/or research institutions to research emissions from train operations in San Ysidro and develop a model to understand health impacts and inform future actions.		
Metrics • Identification of a University partner. • Completion of a research study and a set of clear recommendations.		
Partners & Roles		
Leading ***University and/or research institutions TBD:*** Lead research partner	**Supporting** ***CARB:*** Support with available relevant information such as emissions inventory data. ***SDAPCD- Office of Environmental Justice:*** Coordinate with CSC to help inform research questions and provide feedback on findings and recommendations. ***EPA- Region 9:*** Support with applicable research information.	

Other Sources//Strategy 5 Identify opportunities to reduce dust from roadways and minimize exposure.	**Type** Rule Development, Compliance, Outreach & Engagement, Incentives	**Timeline** Mid-Term (3-5 years)

Actions

1. Rules & Enforcement: Work with the IBCSC to identify the specific fugitive dust concerns from roadways and evaluate whether current SDAPCD rules regarding fugitive dust from roadways, and/or increased SDAPCD presence for enforcement of existing provisions are necessary to reduce dust. SDAPCD to work with the IBCSC to get more data on sources, locations, impact, time/dates and evaluate if SDAPCD's current or expanded authority can address community concerns.
2. Outreach: Conduct outreach to off-road equipment operators (i.e., CPB) on current SDAPCD fugitive dust rules and practices to reduce fugitive dust from roads.
3. Outreach: Conduct targeted outreach to homes and businesses in locations that may be experiencing fugitive dust to increase community outreach and awareness about SDAPCD's air quality complaint process through workshops, trainings, community events, place-based social media, etc. (Also included in Community Care// Strategy 3, Action 4)
4. Incentives: Identify funding and pursue collaboration with appropriate entities to implement home weatherization projects for homes most impacted by dust from CBP and other operations.
5. Incentives: Identify opportunities to reduce dust from paved and unpaved roads in the community through road paving improvements prioritizing areas identified by IBCSC. Additionally, identify and stabilize loose road surfaces with grading and gravel on unpaved roads and maintain treated roads in high priority areas (i.e., where CBP activities are kicking up dust) for surface stabilizing projects (i.e., road paving).

Metrics

- Measurable and meaningful reduction of dust being caused from CBP operations on unpaved roads.
- 500 homes adjacent to area of concern have received information about the air quality complaint program.
- 100% of households adjacent to CBP operations are notified of incentive programs to help them weatherize their home.

Partners & Roles

Leading

SDAPCD- Office of Environmental Justice: Facilitate conversations with IBCSC to get more details (i.e., time of day, specific locations, etc.) on this issue that may be helpful in addressing this situation. Meet with appropriate staff at Customs and Border Patrol to better understand what measures are in place to reduce dust mitigation and develop a plan to reduce dust. Conduct outreach in the adjacent communities, where dust from CBP operations has been identified, to inform them of the complaint program. PIO to do an outreach campaign to off-road equipment operators (i.e., CBP) on current SDAPCD nuisance rules and practices to reduce fugitive dust from roads.

SDAPCD- Compliance: Work with the IBCSC to identify the specific fugitive dust concerns from roadways and evaluate compliance with current SDAPCD rules regarding fugitive dust. If need is identified, increase SDAPCD presence for enforcement of existing provisions are necessary to reduce dust.*

Supporting

Local CBOs: Support with informing the community about the SDAPCD complaint program. Support in administering the weatherization program.

Customs and Border Patrol: Work with SDAPCD to identify unpaved roads, mitigation guidelines for each type of road, and strategies to further mitigate dust.

SDAPCD- Monitoring: Will provide baseline measurements of PM2.5 on the west side of San Ysidro near sites of concern and monitor its levels.

SDAPCD- Rule Development: Evaluate existing rules. If need be, revise or write new rules.* SDAPCD- Incentives: Identify and administer funds to implement strategies to reduce dust from unpaved roads. Identify funding and administer a program in partnership with local CBOs to implement home weatherization projects for homes most impacted by dust from CBP and other operations.*	

Other Sources//Strategy 6 Identify opportunities to reduce dust from construction activities.	**Type** Rule Development, Compliance, Outreach	**Timeline** Mid-Term (3-5 years)
Actions 1. Work with the IBCSC to identify the specific fugitive dust concerns from construction activities and evaluate whether current SDAPCD rules regarding fugitive dust from construction activities (Rule 55), and/or enhanced enforcement of existing provisions are necessary to reduce dust. SDAPCD to work with the IBCSC to get more data on sources, locations, impact, time/dates and evaluate if SDAPCD's current or expanded authority can address community concerns. 2. Increase community outreach and awareness about SDAPCD's air quality complaint process through workshops, trainings, community events, place-based social media, etc. (Also included in Community Care//Strategy 3, Action 3)		
Metrics • Measurable reduction of dust being caused from construction activities.		
Partners & Roles		
Leading ***SDAPCD- Office of Environmental Justice:*** Facilitate conversations with IBCSC to get more details (i.e., time of day, specific locations, etc.) on this issue that may be helpful in addressing this situation. ***SDAPCD- Compliance:*** Work with the IBCSC to identify the specific fugitive dust concerns from roadways and evaluate compliance with current SDAPCD rules regarding fugitive dust from construction sites. If need is identified, increasing SDAPCD presence for enforcement of existing provisions are necessary to reduce dust.* ***SDAPCD- Rule Development:*** Evaluate existing rules. If need be, revise or write new rules.*	**Supporting** ***Local CBOs:*** Support with informing the community about the SDAPCD complaint program. ***SDAPCD- Monitoring:*** Will provide baseline measurements of PM2.5 on the west side of San Ysidro near sites of concern and monitor its levels.	

Other Sources//Strategy 7 Identify opportunities to reduce dust from construction activities.	**Type** Advocacy, CARB Compliance	**Timeline** Long-Term 5+ Years

Actions

1. Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation: The California Air Resources Board (CARB) approved amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) on November 17, 2022, aimed at further reducing emissions from the off-road sector.
2. Off-Road Zero-Emission Targeted Manufacturer Rule: The goal of the Off-Road Zero-Emission Targeted Manufacturer Rule is to achieve criteria pollutant and GHG emissions reductions by accelerating the development and production of zero-emission off-road equipment and powertrains.
3. In-Use Locomotive Regulation: CARB adopted a regulation to reduce criteria pollutants, toxic air contaminants, and greenhouse gas emissions for locomotives in-use in April 2023.
4. Future Measures for Aviation Emissions reductions: The primary goal of future measures for aviation is to reduce emissions from airport and aircraft related activities.
5. Tier 5 Off-Road Vehicles and Equipment: The Tier 5 rulemaking aims to reduce oxides of nitrogen (NOx) and particulate matter (PM) emissions from new, off-road compression-ignition (CI) engines compared to what is allowed by today's Tier 4 final emission standards.

Metrics

- Implementation of CARB's SIP actions to reduce emissions from trains, planes, and off-road equipment.

Partners & Roles	
Leading ***California Air Resources Board (CARB):*** Rule development and implementation.	**Supporting** S***DAPCD- Office of Environmental Justice:*** Coordinate with CARB and provide opportunities for them to provide updates to the CSC regarding their progress. ***SDAPCD- Planning:*** Provide letters of support. Track regulations.*

IBCSC Meeting

CROSS-BORDER

Goal: Reduce emissions and odor from sources in Tijuana such as sewage in the Tijuana River, burning of trash, and industrial-related activities.

Cross-Border//Strategy 1 Advance measures that address odors coming from untreated sewage in the Tijuana River.	**Type** Advocacy	**Timeline** Mid-Term (3-5 years)

Actions

1. Support the federal declaration of the Tijuana River sewage issue as a national emergency.
2. Support increased funding and accelerated timeline for water and sewage treatment plants in the US and Mexico.

Metrics

- Declaration of emergency by the federal government and any other governmental emergency declaration to support expedited funding.
- Adequate funding provided to increase capacity for wastewater management to prevent untreated sewage contaminating the Tijuana River Valley, beaches, and ocean.
- Beaches and water are safe and open for people to become in contact with the water at Southbay beaches (i.e., Friendship Park, Imperial Beach, Silver Strand, Coronado, etc.).

Partners & Roles	
Leading ***SDAPCD- Office of Environmental Justice:*** Provide public testimony and letters of support. Coordinate with City of San Diego, County of San Diego, and Imperial Beach advocacy efforts. Facilitate opportunities for EPA Region 9 and International Boundary and Water Commission to provide updates to CSC. ***EPA Region 9:*** Coordinate federal funding. ***International Boundary and Water Commission***: Coordinate and update stakeholders. State of Baja California: Implement wastewater infrastructure projects.	**Supporting** ***County of SD; City of San Diego; City of Imperial Beach; City of Coronado:*** Lead advocacy efforts and provide strategy guidance to supporters.

Cross-Border//Strategy 2 Conduct monitoring along the Tijuana River and River Valley to understand health impacts and mitigation efforts.	**Type** Monitoring, Research	**Timeline** Short-Term (1-3 years)

Actions

1. Partner with a university to perform air quality study on toxins/pollution coming from environmental odors from Tijuana River in collaboration with US EPA and Mexican public agencies to:
   - Identify levels of H2S, PM 2.5, Total VOCs and health impacts,
   - Develop mitigation strategies, and
   - Integrate "community science"/participatory research and include community members to create “odor diaries” where community members log/write down environmental odor encounters to pinpoint source and time of pollution to support the research.

Metrics
- Identification of a university and/or research institutions partner.
- Six sites with sensor-based monitoring technology located in the Tijuana River Valley and surrounding communities.
- Completion of a research study and a set of clear recommendations.

Partners & Roles

Leading	Supporting
University and/or research institutions TBD: Co-lead research partner with SDAPCD-Monitoring. ***SDAPCD- Monitoring:*** Co-lead research partner with a university and/or research institutions. Support with research information.*	***SDAPCD- Office of Environmental Justice:*** Coordinate with CSC to help inform research questions and provide feedback on findings and recommendations. ***CBOs & Impacted Community:*** Support with participatory research.

Cross-Border//Strategy 3	**Type**	**Timeline**
Work in partnership with the Mexican government to address air quality issues.	Planning, Advocacy	Long-Term 5+ Years

Actions
1. Work with a bi-national coalition and coordinate with the San Diego-Tijuana Air Quality Task Force as part of the U.S.-Mexico Border 2025 Program to identify actionable short-term projects (timeline, identified funding, emission reduction estimates, etc.) that can be implemented to improve air quality.
2. Work with the Mexican government and Coordinate with the San Diego-Tijuana Air Quality Task Force as part of the U.S.-Mexico Border 2025 Program to come up with solutions and identify funding to support the cleanup and management of landfills near the border impacting air quality.

Metrics
- Work with the San Diego-Tijuana Air Quality Task Force to identify and document actionable short-term projects.
- Work collaboratively to secure funding to support project implementation.

Partners & Roles

Leading	Supporting
SDAPCD- Office of Environmental Justice: Active participant in the San Diego-Tijuana Air Quality Task Force. Provide updates to CSC and provide opportunities to have the CSC provide feedback to shape the priorities and actions of the Task Force. ***San Diego-Tijuana Air Quality Task Force as part of the U.S.-Mexico Border 2025 Program:*** Coordination body for cross-border efforts to improve air quality in the San Diego-Tijuana border region. Provide input on air quality priorities and related actions. (SDAQTF is co-chaired by SDAPCD and the State of Baja California.)	***US Consulate:*** Continue to support air quality monitoring efforts in the City of Tijuana by hosting air monitoring equipment. ***US EPA:*** Active participant in the San Diego-Tijuana Air Quality Task Force. Provide coordination support with U.S. and Mexican agencies and grant funding opportunities. ***State of Baja:*** Active participant in the San Diego-Tijuana Air Quality Task Force. Share information on air quality and emission reduction initiatives. Inform priorities and actions of the Task Force. ***CARB's Office of Environmental Justice, Tribal Affairs, and Border Relations:*** Active Participant in San Diego – Tijuana Air Quality Task Force. Provide coordination support with U.S and Mexican agencies, special projects that can benefit the IBC, and to inform priorities and actions of the Task Force.

Cross-Border//Strategy 4 Conduct monitoring and develop an emissions inventory of pollution from Tijuana.	**Type** Monitoring, Emissions Inventory	**Timeline** Mid-Term (3-5 years)

Actions

1. Work with Direccion de Protección al Ambiente de Tijuana (DPA), the Secretaria de Medio Ambiente y Desarrollo Sustentable de Baja California (SMADS), the U.S. Consulate General in Tijuana, academia, research institutions, and community-based or civil organizations to collect data from air monitoring stations and sensor-based monitors in Mexico (i.e., purple air monitors at Consulate, airport, etc.).
2. Work with Mexican and U.S. public agencies, academia, research institutions, and community-based or civil organizations to get an emissions inventory to understand what the sources of cross-border pollution are and how they can be addressed by Mexican authorities.

Metrics

- Incorporate information, as available, from sensor-based monitors in Mexico when updating the CSC on monitoring efforts and data.
- Obtain and share updated emissions inventory data from Mexico as it becomes available.

Partners & Roles

Leading	**Supporting**
SDAPCD- Office of Environmental Justice: Support coordination of data exchange with SDAPCD and Mexican agencies. ***SDAPCD- Monitoring:*** Coordinate with appropriate Mexican agencies to obtain air quality monitoring data. US EPA: Collaborate with the appropriate Mexican agencies to support the development of an updated emissions inventory for the State of Baja California. ***State of Baja:*** Share data and information regarding air quality and the air monitoring network in the City of Tijuana. Work with the appropriate agencies to support the development of an updated emissions inventory.	***CARB:*** Continue to provide technical assistance to the State of Baja California for the deployment of sensor-based monitoring equipment. ***San Diego-Tijuana Air Quality Task Force as part of the U.S.-Mexico Border 2025:*** Program Serve as a coordinating and information exchange platform for U.S. and Mexican agencies and the public. ***US Consulate:*** Share information and data regarding the air quality monitoring equipment located at their facility.

IBCSC Meeting

IBCSC Meeting

CHAPTER 5: ENFORCEMENT PROGRAM

SAN DIEGO AIR POLLUTION CONTROL DISTRICT'S (SDAPCD) ENFORCEMENT PROGRAM

Overview

The San Diego Air Pollution Control District's (SDAPCD) Enforcement Program is designed to ensure sources of air pollution achieve compliance with all applicable local, state, and/or federal rules and regulations to protect public health and the environment. The Enforcement Program involves the following elements to manage air pollution within the San Diego County:

- Field inspections of stationary sources and mobile sources;
- Air quality complaint investigations;
- Enforcement documents and violation settlement program; and
- Compliance assistance.

In addition to the four elements listed above as being important components of any Enforcement Program, operational sustainability is key in ensuring that these elements can be implemented fully. Operational sustainability means ensuring that SDAPCD has internal policies, procedures, culture, and budget to have adequate capacity and resources that are sustained to fulfill its duties and commitments. This is not just the case for the Compliance Division at SDAPCD, but for every Division within the organization. There are a few CERP strategies that specifically address the Enforcement Program element of operational sustainability.

In the next section, each of the Enforcement Program elements will be described in greater detail. The number of inspections, air quality complaints, permits and enforcement actions are based on zip codes 92173 and 92154 since currently the SDAPCD does not capture information regarding its programs for each census track.

Field Inspections

During field inspections, SDAPCD inspectors evaluate various types of equipment and operations that can create air emissions to verify compliance with all applicable air quality rules and regulations. If a violation is documented, the source is subject to enforcement actions. Sources permitted by SDAPCD are inspected at least once per year. Field inspections are essential to support SDAPCD's enforcement efforts. SDAPCD is involved in two types of inspections, stationary source inspections and mobile source inspections.

Stationary Source Inspections

SDAPCD primarily regulates stationary sources of air pollution, which include manufacturing and industrial operations, power plants, coating operations, gas stations, engines, boilers, aggregate facilities, landfills, and others. Those sources are subject to local, state and/or federal air quality regulations. In 2022 there were 8,658 stationary inspections conducted regionwide and 258 in the International Border Communities. The small amount of inspections is due to the fact that the International Border Communities does not have a lot of stationary permits (total of 250 permits) and that the area is relatively small compared to the rest of the region. There is a total of approximately 7,800 active permits in San Diego County and out of these permits, approximately 250 (or about 3 percent) are for sources located in the International Border Communities (zip codes 92173 and 92154).

The SDAPCD permits (approximately 7,800) include all stationary source permits, local registrations, and permits issued for portable equipment. About 70% of the permitted operations in the community are issued to engines, gas stations,

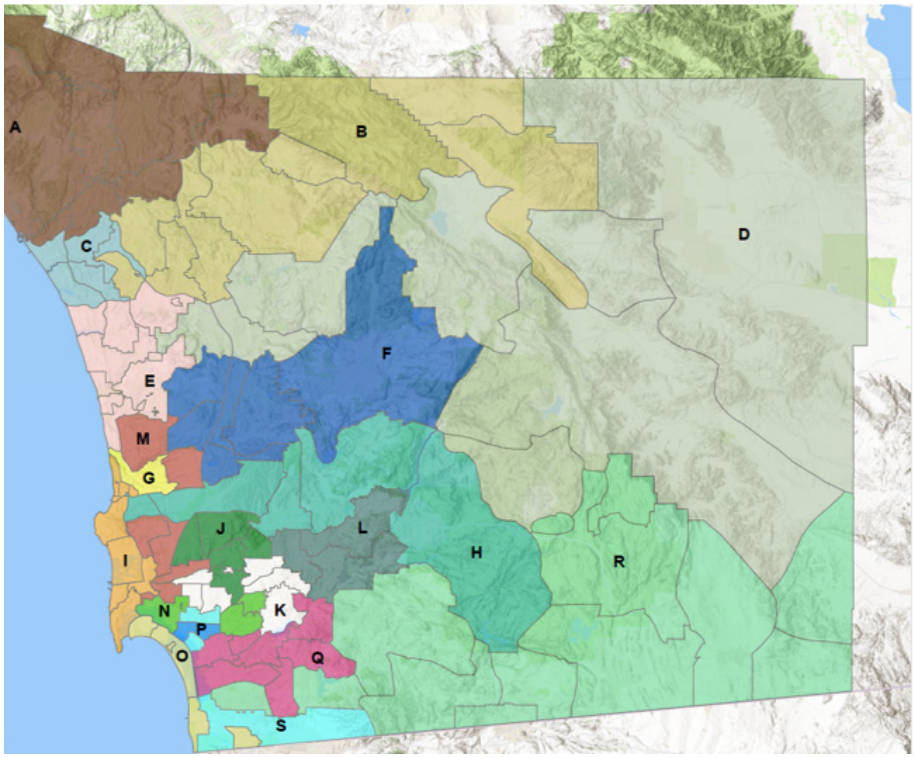


Figure 15: Stationary Source Sectors (Excluding Gas Stations)

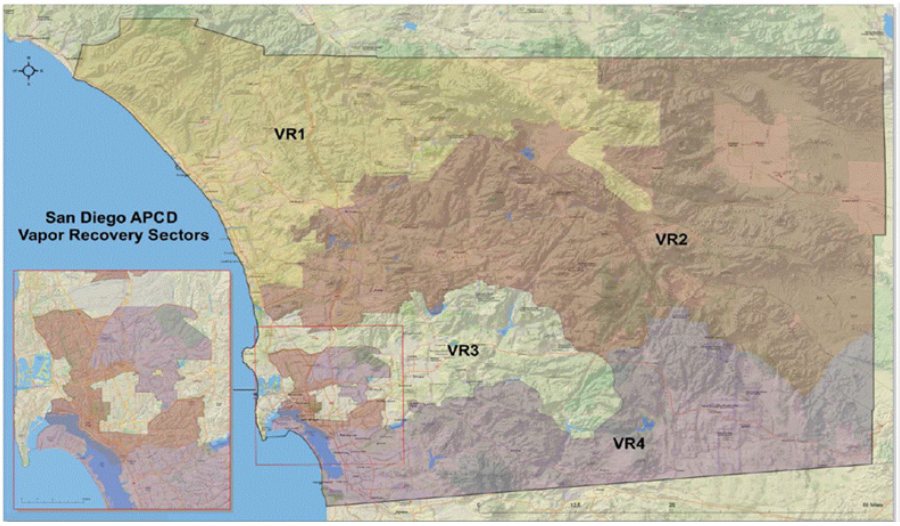


Figure 16: Gas Station Sectors

boilers, abrasive blasting, and various types of coating.

Under the SDAPCD's inspection program, the County is divided into geographical areas (or sectors). Currently there are 23 sectors that were established based on the number and nature of stationary sources. Each sector is assigned to an air quality field inspector and the sectors are periodically rotated to provide inspectors different perspectives and levels of experience. The International Border Communities are in sectors O, S and VR4.

Although most stationary sources are inspected annually, certain sources are inspected more frequently. Sources subject to Title V of the Clean Air Act (except for peaking power plants) are inspected twice and sometimes four times per year. Within the boundaries of or in close proximity to the International Border Communities there are three sources subject to Title V (Otay Mesa Energy Center, Larkspur Energy and CalPeak Power).

Mobile Source Inspections

Historically, SDAPCD primarily has regulated stationary sources of air pollution while the California Air Resources Board (CARB) has had jurisdiction over mobile sources. However, San Diego County is not in compliance with a federal and state health-based ground-level ozone standard70F . These standards are set by the federal Environmental Protection Agency (EPA) and CARB for the maximum level of a given air pollutant which can exist in the outdoor air without adverse health effects. Ground-level ozone (or smog) is a respiratory irritant that negatively impacts at-risk people,

Figure 17: Truck Inspections at CHP Otay Mesa Facility.

including children, the elderly, and people with respiratory ailments. Attaining the ozone standards will improve the health of San Diego County residents and visitors. However, over 90% of the oxides of nitrogen (NOx) emissions, a key precursor to ozone formation, emanate from mobile sources.[38] In addition to the challenges related to ozone formation, exhaust from trucks, buses, trains, ships, and other equipment with diesel engines contains a mixture of gases and solid particles known as diesel particulate matter (DPM). DPM has a significant impact on California's population. It is estimated that about 70% of total known cancer risk related to air toxics in California is attributable to diesel PM.[39] Additionally, statewide mobile sources emit over 90% of DPM.[40]

SDAPCD jurisdiction is primarily stationary sources, including manufacturing facilities, landfills, power plants, stationary engines, and other operations that can create air pollution. Regulatory authority for mobile sources lies with CARB and EPA. Prior to 2014, SDAPCD primarily regulated stationary sources. But to help address the air pollution contributions from mobile sources in the San Diego air basin, in 2014 SDAPCD signed a Memorandum of Understanding (MOU) with CARB to enforce certain mobile source regulations on CARB's behalf.

The Mobile Source Program brings great benefits for the International Border community. SDAPCD Inspectors conduct truck inspections at the California Highway Patrol Otay Mesa Commercial Vehicle Enforcement Facility, a "port-of-entry" with a high number of diesel trucks. On average, approximately 300 truck inspections are conducted annually at this facility.

SDAPCD staff conducts approximately 42 mobile source inspections in the International Border Communities on a monthly basis. Figure 18 provides an overview of the local mobile source enforcement program between 2021 and 2022 in San Diego County and in the International Border Communities. It shows the number of inspections conducted for On-Road and Off-Road vehicles, number of citations issued, and overall compliance rate for each year.

Air Quality Complaint

Figure 18: Mobile source inspections and citations report from 1/1/2021-12/31/2022.

Investigations

SDAPCD administers a program to receive and respond to air quality complaints submitted by members of the public concerning emissions of air contaminants including smoke, dust, and odors. This program provides an effective mechanism to engage with members of the communities SDAPCD serves and to determine compliance of SDAPCD rules and regulations. Complaints can be submitted to SDAPCD via the SDAPCD mobile app, by phone (858-586- 2650), or e-mail at apcdcomp@sdcounty.ca.gov. All services are available in English, Spanish and other languages as needed. SDAPCD in the past couple of years has enhance and automated its complaint investigation program by developing systematic controls and reporting tools to make complaint related data including nature of complaint and resolution available to the public in real-time.

On average, the SDAPCD receives and investigates about 700 air quality complaints annually countywide and about 10 in the International Border Communities. Complaint investigations are conducted when members of the public notify the District of an air quality concern. Specifically, in the International Border Communities, in 2022 SDAPCD received 9 complaints and conducted 9 investigations. Complaints from the International Border Communities constitutes 1.5% percent of countywide complaints SDAPCD received in 2022. The nature of complaints varies but overall, most complaints are related to odors and dust countywide and in the International Border Communities. In 2022 SDAPCD responded to complaints within 7.5 hours, on average. Complaints received from International Border Communities were investigated within 6.7 hours, on average.

The relatively low number of complaints from within the boundaries of the International Border Communities does not necessarily mean that there are few air quality issues that merit a complaint. It may be an indicator that not many people are aware of SDAPCD's complaint program. This enforcement mechanism is only as effective as the community is aware of its existence. The SDAPCD is committed to enhancing its outreach efforts to further connect and serve the International Border Communities.

Enforcement Documents and Violation Settlements

SDAPCD's enforcement program is designed to deter non-compliance and assist the violator to come back into compliance. When taking enforcement actions, SDAPCD uses one of the following documents to formally notify the entity of the violation:

- Notice to Comply (NTC) which is issued for minor violations in accordance with District Rule 6. Violations documented utilizing Notices to Comply do not result in monetary penalties if the entity corrects the deficiency in a timely manner.
- Notice of Violation (NOV) which formally identifies a violation of rules and/or regulations. NOV typically results in monetary penalties and may result in civil suit, or in serious cases, criminal prosecution.
- Mobile Source Citations (citations) are issued to document violations of regulations listed in the MOU between the District and CARB.

The SDAPCD resolves most Notices of Violation and citations through the Violation Settlement Program, which is an informal opportunity to resolve a violation without the burden and cost of litigation. Certain citations are referred to the California Air Resources Board for settlement.

Additionally, SDAPCD administers a Supplemental Environmental Project (SEP) Program to evaluate community-based projects that can be funded from a portion of the penalties received during settlement of enforcement actions. The SEP Program can improve public health, reduce pollution, increase environmental compliance, and bring public awareness to neighborhoods most burdened by environmental harm. SDAPCD's SEP Program Policy establishes the process for selection of SEPs and how SDAPCD will oversee implementation of SEPs that are included in settlement agreements. Eligible SEP proposals must promote public health, pollution prevention and reduction, environmental protection, or environmental compliance and must go beyond any federal, state, and local requirements. The purpose of a SEP is to improve public health, prevent or

	Countywide	International Border Communities
Notice of Violation (Stationary Sources)	1,030	36
Citations (Mobile Sources)	340	68

Figure 19: Provide data on the number of NOV and citations, which result in monetary penalties issued in 2022.

reduce pollution, enhance environmental protection and environmental compliance, and/or bring public awareness to neighborhoods most burdened by environmental harm. A SEP can include but is not limited to an environmental clean-up, air pollution reduction, air pollution monitoring, or public outreach that focuses on the elimination or reduction of air contaminant emissions.[41]

Compliance Assistance

SDAPCD administers a compliance assistance program to provide training opportunities and general assistance to regulated entities. This program can prevent violations of air quality regulations and ensure a level playing field for all regulated entities as some facilities do not have access to environmental consultants or other professionals who can explain regulatory requirements and provide general assistance. Under this program, SDAPCD currently provides the following services:

- Provides training classes for mobile source and gas station operators as well as contractors that work on projects involving asbestos-containing materials. Other training opportunities are also provided on an as needed basis to address specific needs.
- Addresses general inquiries from the regulated community.
- Prepares compliance advisories.
- Provides templates for recordkeeping forms and emission calculations.
- Conducts courtesy inspections to prepare business for compliance inspections.
- Prepares training videos regarding various regulatory requirements.
- Provides general assistance for permit application submittal.

Compliance Strategies Implementation

There are seven strategies identified by the IBCSC that have an SDAPCD enforcement, also known as compliance, component as part of their implementation actions. The following outlines the CERP strategy, what specific enforcement program element(s) are applicable, and the metrics and roles of SDAPCD Compliance Division.

Enforcement Program Element(s): Air Quality Complaint Investigations; Field Inspections; Enforcement Documents; Operational Sustainability	
Community Care//Strategy 3 Increase SDAPCD's presence in the International Border Community.	Role: Meet with CSC. Follow up on complaints and issues identified by CSC. Metric(s): Compliance to meet with IBCSC twice a year for the next 5 years to receive feedback on air quality issues of concern, share what has been documented within those six months from the complaint program, and share what actions have been done in response to those complaints.

Enforcement Program Element(s): Supplemental Environmental Project (SEP)	
Community Care//Strategy 10 Continue to identify opportunities to fund mitigation and emission reduction projects that protect community health and improve quality of life.	Role: Once per year check in with CSC to hear their community benefiting project ideas and provide updates on SEP projects that may be happening in their communities. Metric(s): Projects identified and shared. Implementation of projects in the community (if applicable) and annual updates provided.

Enforcement Program Element(s): Field Inspections of Mobile Sources; Enforcement Documents; Air Quality Complaint Investigations	
Heavy-Duty Vehicles//Strategy 8 Increase the number of inspections at the CHP station at Otay Mesa or surrounding areas.	Role: Identify funding opportunities. Coordinate with CBP to increase inspections. Metric(s): Funding opportunities (i.e., CARB request, new sustainable funding models, fees, etc.) to SDAPCD compliance have been secured. SDAPCD's Compliance Division to work with CARB staff and IBCSC to increase and determine the appropriate amount of monthly mobile inspections, taking into account the volume of heavy-duty trucks traveling in the International Border communities, to adequately deter and identify heavy-duty trucks out of compliance. Work with CARB to identify funding sources to support SDAPCD inspection staff necessary to inspect and address the volume of heavy-duty trucks in the International Border Communities. Provide updates to CSC regarding progress on an annual basis.
Additional Notes: Trucks registered in and coming across the border from Baja California are subject to enforcement. SDAPCD conducts inspections under a MOU with CARB. During those inspections SDAPCD documents numerous trucks with dual registration in Baja and California with numerous companies that are based in Baja. These trucks are subject to the same regulations as others and they are inspected frequently (i.e., several times a month the same trucks are pulled over). APCD checks for smoke by measuring smoke opacity, looks for emission control information, and makes sure that they have newer engines and look for diesel particulate filters to ensure they are in good operating condition. APCD is aware of the high traffic volume coming across the border and therefore targets this area for inspections. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling | California Air Resources Board California has a commercial vehicle idling regulation/Air Toxic Control Measure that limits idling to 5 min or less (with some exceptions). Residents can submit complaints if they see idling vehicles and SDAPCD will investigate. CARB also conducts idling inspections in this area and may have some data to share.	

Enforcement Program Element(s): Air Quality Complaint Investigations	
Other Sources//Strategy 3 Support policies, programs, and actions that reduce emissions from Customs and Border Protection (CBP) operations.	Role: Support in identifying existing local, state, and federal rules and determine current compliance of these rules. Metric(s): Implementation of compliance and mitigation efforts to measurably reduce emissions from CBP operations.
Additional Notes: While generally, Rule 50 (Visible Emissions) and Rule 51 (Public Nuisance) are rules to address public nuisance and dust, there are challenges to determine compliance for this type of source (not ongoing, moving emission source, EPA Method 9 constraints). Areas where this is an impact and outreach to the Border Patrol could be explored. Additionally, enhancement of community outreach efforts on how to file a complaint with SDAPCD can help make a record of this issue and better understand the impacts to the community. However, enforcement with the current rules at this time may be limited and may merit an evaluation of the expansion of SDAPCD's authority to address community concerns.	

Enforcement Program Element(s): Air Quality Complaint Investigations	
Other Sources//Strategy 5 Identify opportunities to reduce dust from roadways and minimize exposure.	Role: Work with the IBCSC to identify the specific fugitive dust concerns from roadways and evaluate compliance with current SDAPCD rules regarding fugitive dust. If need is identified, increase SDAPCD presence for enforcement of existing provisions are necessary to reduce dust.*
Additional Notes: While generally, Rule 50 (Visible Emissions) and Rule 51 (Public Nuisance) are rules to address public nuisance and dust, there are challenges to determine compliance for this type of source (not ongoing, moving emission source, EPA Method 9 constraints). Areas where this is an impact and outreach to the Border Patrol could be explored. Additionally, enhancement of community outreach efforts on how to file a complaint with APCD can help make a record of this issue and better understand the impacts to the community. However, enforcement with the current rules at this time may be limited and may merit an evaluation of the expansion of SDAPCD's authority to address community concerns.	

Enforcement Program Element(s): Supplemental Environmental Project (SEP)	
Other Mobile Sources//Strategy 6 Identify opportunities to reduce dust from construction activities.	Role: Work with the IBCSC to identify the specific fugitive dust concerns from roadways and evaluate compliance with current SDAPCD rules regarding fugitive dust from construction sites. If need is identified, increase SDAPCD presence for enforcement of existing provisions are necessary to reduce dust.* Metric(s): Measurable reduction of dust being caused from construction activities.

IBCSC Meeting

CALIFORNIA AIR RESOURCES BOARD'S (CARB) ENFORCEMENT OF MOBILE SOURCES

The California Air Resources Board's (CARB) Enforcement Division aims to develop partnerships with International Border organizations to co-lead the development of community-focused action plans that reduce disproportionate exposures within the International Border Communities (IBC) boundary. CARB is charged with enforcing its regulations applicable to mobile sources, consumer products and other area-wide categories, such as fuels, and climate programs, while the San Diego Air Pollution Control District (SDAPCD) is primarily responsible for enforcement relating to stationary sources (e.g., boilers, refineries, power plants, coating operations). Uniquely, SDAPCD and CARB entered into a memorandum of understanding that gives SDAPCD the authority to actively enforce several mobile sources including inspecting trucks, off-road equipment, idling and Transport Refrigeration Units (TRU).

CARB enforcement programs cover the vehicles we drive, the diesel engines that power our economy, consumer products that we purchase, and greenhouse gas (GHG) emissions from our industries and activities. The goal of CARB enforcement programs is to achieve comprehensive compliance in every regulation the CARB adopts. Through enforcement, we work to bring responsible parties into compliance and in doing so achieve a level playing field across industry so that no company can benefit from non-compliance at the expense of another; and to deter industry from future violations.

CARB applies enforcement programs in accordance with the enforcement policy, which was updated in 2017. CARB uses data and inspections to identify potential non-compliance, and then investigate each case. Once a violation is identified, CARB notifies the potential violator and evaluates what happened. CARB works with the responsible party to achieve compliance and measure the relevant facts and circumstances of each case, relative to eight factors set in law and described in the enforcement policy, to determine an appropriate penalty. The case is settled when the responsible party has achieved compliance and paid an appropriate penalty. If the case cannot be settled, CARB works with legal staff to refer the case to California's Attorney General for litigation.

Field inspectors are a critical component of the diesel enforcement program. The inspectors work across the state to inspect trucks and other equipment for compliance with CARB's diesel regulations, such as Clean Truck Check, Solid Waste Collection Vehicle, Statewide Truck and Bus, Tractor-Trailer Greenhouse Gas, Off-Road Diesel Equipment, Commercial Vehicle Idling, and Transport Refrigeration Unit. Field inspectors also conduct inspections for compliance with Public Agencies and Utilities, Cargo Handling Equipment, Commercial Harbor Craft, Ocean Going Vessel, and Shore Power regulations. CARB inspectors examine heavy-duty vehicles and equipment at numerous locations throughout California, such as along roadsides, at California Highway Patrol scale facilities, warehouses, fleet yards, construction sites, truck stops, rest areas, ports, and rail yards.

CARB's enforcement activities can be found in CARB's Enforcement Data Visualization System (EDVS), located here: Enforcement Data Visualization System – California Air Resources Board. A guide to how to use EDVS is here: Enforcement Data Visualization System (ca.gov). Additional information on CARB Enforcement Activity can be found in our Annual Reports: https://ww2.arb.ca.gov/resources/documents/enforcement-reports

Heavy-Duty 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 (PM) and nitrous oxide (NOx) emission standards. Many manufacturers employed the installation of diesel particulate filters to meet the PM standard, as well as exhaust aftertreatment to meet the NOx emission standard. These devices remove more than 98 percent of toxic diesel emissions from Heavy-Duty Diesel Trucks (HDDTs) when properly functioning. In addition, because diesel engines 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

Table 9: IBC HDDT inspections.

Program Categories	Number of Inspections		
	2020	2021	2022
HDVIP-Emission Control Label	153	346	126
HDVIP-Smoke Opacity	151	336	132
HDVIP-Tampering	99	207	81
Idling	261	404	358
Off-Road	23	0	0
SmartWay	3	2	13
Transport Refrigeration Unit	11	32	59
Truck and Bus	271	318	113

diesel PM and NOx emissions by over 90 percent in communities statewide.

CARB developed a comprehensive heavy-duty vehicle inspection and maintenance regulation to ensure that vehicles' emissions control systems are properly functioning when traveling on California's roadways. The Board approved the regulation in December 2021, with implementation to be phased in starting January 2023. Dubbed the Clean Truck Check, the program combines periodic vehicle testing requirements with other emissions monitoring techniques and expanded enforcement strategies to identify vehicles in need of emissions related repairs and ensures any needed repairs are performed. The Clean Truck Check subjects nearly all non-gasoline vehicles with a gross vehicle weight rating (GVWR) over 14,000 pounds that operate in California to periodic emissions testing. Analogous to California's Smog Check program for light-duty vehicles, these testing requirements help ensure that heavy-duty vehicles operating in California remain equipped with properly functioning emissions controls, and when malfunctioning, that these systems get repaired in a timely manner. When fully implemented, the program will provide significant reductions in smog-forming and carcinogenic toxic air pollution necessary to achieve federal air quality mandates and healthy air in California's communities.

As mentioned earlier, in 2014 CARB and SDAPCD entered into a memorandum of understanding (MOU) which authorized SDAPCD to conduct inspections to determine compliance with certain regulations adopted by CARB for motor vehicles, off road, idling, nonvehicle engine or vehicle categories, and motor vehicle fuels. This authorized SDAPCD to enforce Statewide Truck and Bus, the former Heavy Duty Vehicle Inspection Program (HDVIP), the off-road in-use diesel regulation, transport refrigeration unit ATCM, and the former drayage truck measures. The HDVIP inspections included an inspection of emission control systems, a smoke emissions test, and a download of the on-board diagnostic (OBD) to check for any emissions-related faults. Beginning in 2023, the inspections previously under HDVIP now fall under Clean Truck Check, along with additional requirements. Currently, CARB and SDAPCD are in discussions to update the MOU.

Table 10: IBC HDDT Compliance Rates

Program Categories	Compliance Rate		
	2020	2021	2022
HDVIP-Emission Control Label	95%	94%	87%
HDVIP-Smoke Opacity	89%	74%	79%
HDVIP-Tampering	87%	93%	82%
Idling	95%	98%	97%
Off-Road	91%	N/A	N/A
SmartWay	100%	100%	100%
Transport Refrigeration Unit	9%	22%	51%
Truck and Bus	86%	92%	99%

As reported in EDVS, CARB field enforcement data show high compliance rates in idling, SmartWay, and Truck and Bus programs and lower compliance rates for smoke opacity and transport refrigeration units from 2020 through 2022, within the IBC community border. CARB will work with the IBC Community Steering Committee to prioritize inspection locations to ensure that sufficient enforcement is taking place in the community.

Truck and Bus Rule

Nearly all trucks and buses in California are already, or will be, required to have a certified 2010 or newer model year engines by January 2023, to comply with CARB's Truck and Bus rule to legally operate in California. 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 implementation and enforcement, the compliance rate statewide for the rule was 98 percent in 2022. Trucks and buses that cannot demonstrate compliance with the statewide truck and bus rule will have registration holds placed on them with DMV and will be prevented from being driven in California. According to DMV data, in January 2023, vehicles registered in the IBC community zip codes had a 99.6 percent compliance rate for heavy-duty diesel vehicles and 97 percent for light-duty diesel vehicles.

Portable Emission AcQuisition System

The Portable Emission AcQuisition System (PEAQS) is an emission screening system that obtains a real-time snapshot of each truck's exhaust emissions including black carbon, carbon dioxide, and oxides of nitrogen (NOx) as it passes through the device's detection area. PEAQS includes an Automated License Plate Reader (ALPR) camera to help pair the exhaust emissions reading with a specific vehicle. The portable system has piping that draws in air above or next to the road reads emissions of vehicles as they pass. PEAQS has a computer system where CARB Enforcement can monitor the results. If inspectors see an unusual spike in the pollutant measurements caused by a passing vehicle, they will work with California Highway Patrol (CHP) officers to pull the vehicle over for a full inspection of the emission control systems. Vehicles may also be pulled over for other reasons, including at random, for full inspections of the emission control systems.

Consumer Goods

Consumer product inspections are an important regulatory tool to improve public health in the community. Consumer products, such as hairsprays, deodorants, and flooring, are widely used but can be sources of toxic air containments (TACs) and volatile organic compounds (VOC) that community members bring into their homes. From 2020 to 2022, CARB conducted zero consumer products inspections within the IBC community.

Fuels

CARB is authorized to adopt standards, rules, and regulations to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state ambient air quality standards at the earliest practicable date. CARB's fuels effort is made up of several components which broadly fall into two categories: (1) adopting and enforcing fuel specifications, and (2) controlling emissions from marketing and distributing fuels in California.

From 2020 through 2022, CARB conducted two fuel inspections for diesel and biodiesel. Both inspections resulted in violations. CARB will continue to inspect for fuel violations to ensure compliance.

Other Areas of Mobile Enforcement

CARB enforces many areas related to mobile vehicles including engines, fuel containers, refrigerants, and the windshield washer fluids. All these programs contribute to CARB's overall efforts to tackle emissions of all types from all sources. See appendices for more information on these programs.

AB 423 (Gloria, 2019) requires CARB to perform a review of SDAPCD. The goal of the program review is to evaluate key district programs (permitting, regulatory, compliance, planning, monitoring, and incentives), and identify potential program improvements. To accomplish the goal, CARB staff assessed SDAPCD's rules, policies, and practices, documented findings, and prepared recommendations to increase the district's effectiveness. The final report of this program will be complete in late 2023.

In support of CARB's program review of SDAPCD, CARB assisted with the following stationary source inspections within the IBC boundary:

Table 11: PEAQS Deployment Results.

	2021		
Location	Vehicles Screened	Vehicles Inspected	Citations Issued
Otay Mesa	4,400	115	54
	2022		
Location	Vehicles Screened	Vehicles Inspected	Citations Issued
Otay Mesa	3,115	70	40

Table 12: Mobile Related Enforcement.

Program	Inspections	Violations
Dealer and Fleet Tampering	1	0
HFC-134a Refrigerant	3	2

- On July 29, 2021, CARB staff observed SDAPCD staff conduct a routine compliance inspection at Vulcan Materials' Otay Asphalt plant (Vulcan). Vulcan operates a hot-mix asphalt plant, in Otay Mesa, that uses new and recycled materials to produce asphalt concrete. After the inspection, SDAPCD staff issued NOV# APCD2021-NOV-000495 to Vulcan for violations identified during the inspection.

Complaints Received

Reporting potential violations of air quality requirements can provide important information for Enforcement. Staff investigates tips about non-compliance and takes all complaints very seriously. Often details can't be discussed during the inspection process but every attempt to resolve the complaint will be made. CARB takes enforcement action based on the investigation of the complaint which can lead to a notice of violation. Sometimes the investigations can take long and remain pending, other times the complaints are not actionable because CARB did not receive enough information to initiate an investigation. Based on the nature of the complaint, we may refer the complaint to another agency that has the appropriate jurisdiction. CARB received 24 mobile complaints from the IBC community between 2020-2022, most of the complaints CARB received were for smoking vehicles and idling. CARB also received 8 non-mobile complaints from 2020-2022, mostly consisting of odors, smoke, and issues from stationary source facilities, which were referred to SDAPCD for action.

An important part of AB 617 is increasing community awareness of the tools that are available to residents. Reporting complaints to both SDAPCD and CARB enables members of the public to play an active role in addressing air pollution concerns in their community. Both agencies rely on community input for identifying additional locations and sources of concern. CARB accepts and addresses all air quality complaints as they come into the system, including mobile sources and oil and gas facilities. To report a complaint to CARB regarding environmental concerns, please go to CARB's online complaint page at: https://ww2.arb.ca.gov/environmental-complaints

Supplemental Environmental Projects

CARB has a Supplemental Environmental Project (SEP) policy that allows community-based projects to be funded from a portion, up to 50 percent, 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. Currently, SEP funds have been used to sustain an existing, 12 air monitor network, along the U.S. - Mexico border. The air monitors measure for PM 2.5, CO, NO, NO2, and O3 and relay real-time data to community members via an online platform. 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) or email us at SEP@arb.ca.gov.

Strategies

CARB Enforcement has begun developing a community-based approach that builds on the fundamental idea that part of achieving environmental justice is making sure we are partnering directly with community members to truly understand community issues more holistically. Rather than solely focusing on our traditional enforcement programs in a community, we propose instead, to bring our expertise and labor as part of a team collaborating with community members as partners to investigate and document community concerns more broadly and work together to identify strategies that may help to solve the problems community members are experiencing. We aim to provide a broader array of assistance through this approach. Our goal is to develop co-designed and co-led projects that empower communities, focus on community identified priorities, leverage enforcement, that result in community investigations that help us understand how to develop stronger enforcement approaches in the International Border Communities.

On the next page are some suggested strategies for the community to consider assisting and guiding development.

Strategy	Corresponding Action	Enforcement Program Element
CARB Strategy 1: Continue PEAQS deployment	CARB will work with the Community Steering Committee (CSC), SDAPCD, CHP to identify locations to deploy PEAQS, within the IBC boundary, that have high heavy-duty truck traffic or are a concern to the community.	Mobile Source Inspections
CARB Strategy 2: Idling prevention and outreach	CARB will work with the CSC and local agencies to identify locations, where it's feasible, to install No Idling signs on roadsides or at schools and parks.	Mobile Source Inspections, Education and Outreach
CARB Strategy 3: HDDT inspections	CARB will work with CSC and SDAPCD to review enforcement data to determine how to direct and prioritize diesel vehicle enforcement activities and locations.	Mobile Source Inspections
CARB Strategy 4: Audits and SEPs	Since 2016, CARB has conducted 20 company audits within the IBC area. Violations in these cases included Truck and Bus rule, TRUs and consumer goods. Of the 20 settlements only a few opted for the SEP program. CARB investigators will encourage entities resolving violations of CARB's rules to fund SEPs. CARB will also work with the CSC to learn about and help the CSC develop SEPs for their community.	Compliance Assistance; Enforcement Documents; Funding and Incentives
CARB Strategy 5: Construction Site Enforcement	CARB to jointly work with SDAPCD on focused enforcement at construction sites of concern, as identified by the CSC, to evaluate compliance with CARB regulations	Mobile Source Inspections

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CHAPTER 6: CEQA

Pursuant to the California Environmental Quality Act[42] and its implementing regulations,[43] collectively referred to as CEQA, the District, as the lead agency for the IBCSC CERP, is required to consider if there are any potential environmental impacts associated with the approval of the IBCSC CERP. CEQA describes and imposes specific legal requirements that agencies must follow when evaluating and making decisions about whether a project will cause a significant environmental impact. The information below describes what District staff has done and determined with respect to this IBCSC CERP. The information below does contain some legal terms because that is the language contained in the law and use of that language is part of how an agency demonstrates compliance with that law.
The CEQA evaluation generally follows a decision tree to determine the level of environmental review required, if any. The first step is to determine if the IBCSC CERP is a project. CEQA defines a project broadly as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment...." (CEQA Guidelines Section 15378(a).) If the IBCSC CERP is not a project, no further CEQA review is required. SDAPCD staff has determined that the IBCSC CERP is a project as defined by CEQA.

The next step is to evaluate if the IBCSC CERP is exempt from further CEQA review. (CEQA Guidelines Sections 15002(k); 15061.) There can be various reasons why a project might be exempt from CEQA review. These can include a determination that it can be seen with certainty that the project will not have a significant effect on the environment; a determination that the project is statutorily exempt; or a determination that the project is categorically exempt, and no exception applies.

SDAPCD has evaluated all aspects of the IBCSC CERP and determined it is exempt from the requirements of CEQA. If the approval of the IBCSC CERP was not exempt, the next steps would have been to determine if SDAPCD needed to prepare a Negative Declaration or an Environmental Impact Report. The basis for the SDAPCD's decision that the IBCSC CERP is exempt are as follows:

- CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption. District staff has determined that it can be seen with certainty that there is no possibility that the actions within the IBCSC CERP may have a significant adverse effect on the environment.
- CEQA Guidelines Section 15262 – Feasibility and Planning Studies. Portions of the IBCSC CERP include strategies that qualify as feasibility and planning studies, because information needs to be collected to make an informed decision about further action (e.g., rule development). However, the portions of the CERP that qualify as feasibility and planning studies do not prescribe or commit to specific projects or rule requirements, nor have future actions been approved or adopted in advance, because they require an open public process. The regulated community, stakeholders, interested parties, and the public are invited to participate in the rule development process in a public forum. Thus, the portion of the CERP that contains action items which qualify as feasibility or planning studies is statutorily exempt from CEQA.
- CEQA Guidelines Section 15301-Existing Facilities. Portions of the IBCSC CERP may involve operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use, for instance for installing air filters, installing electric vehicle charging infrastructure, or installing air monitoring equipment.
- CEQA Guidelines Section 15303- New Construction of Conversion of Small Structures. Portions of the IBCSC CERP may require minor physical modifications to existing structures or buildings, such as installing air filters, installing electric vehicle charging infrastructure, or installing air monitoring equipment.

- CEQA Guidelines Section 15304-Minor Alterations to Land. A portion of the action items within the IBCSC CERP may involve urban greening, tree planting, and similar activities.
- CEQA Guidelines Section 15306 – Information Collection. A portion of the action items within the IBCSC CERP involves the collection or exchange of information or data, which may be obtained from inspections and air monitoring, as well as other sources.
- CEQA Guidelines Section 15308 – Actions by Regulatory Agencies for Protection of the Environment. The proposed project is categorically exempt because the overall purpose of this project is to improve the environment and health of residents of this selected community and all of the action items within the CERP support this goal.
- CEQA Guidelines Section 15309 – Inspections. Portions of the IBCSC CERP include actions to enhance compliance efforts, including performance checks and inspections.
- CEQA Guidelines Section 15321 – Enforcement Actions by Regulatory Agencies. Finally, a portion of the action items within the IBCSC CERP relies on increasing enforcement activities.
- CEQA Guidelines Section 15300.2 -The reliance on categorical exemptions provides for some exceptions to the exemption language in CEQA to cover circumstances that may affect exempt projects. District staff has determined that there is no substantial evidence indicating that any of the exceptions to the categorical exemptions apply to the proposed project. Therefore, as mentioned above, the proposed IBCSC CERP is exempt from CEQA.

If the District Governing Board agrees with this determination that the IBCSC CERP is exempt from CEQA, and adopts the IBCSC CERP, a Notice of Exemption will be filed with the San Diego County Recorder/Clerk and will be posted to the District website.[44]

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APPENDIX A: CARB DESCRIPTIONS

CARB Heavy-Duty Diesel Vehicle Program descriptions

Drayage: The Drayage Truck Regulation is part of CARB's ongoing efforts to reduce particulate matter and oxides of nitrogen emissions from diesel-fueled engines and improve air quality associated with goods movement. Heavy-Duty Vehicles that carry goods to or from a port or intermodal facility are required to be equipped with a 2007 or newer model year engine. This requirement becomes stricter in 2023, when Drayage trucks are required to be equipped with a 2010 or newer model year engine, because Drayage trucks will be required to meet the standards of the Truck and Bus Regulation.

Heavy-Duty Vehicle Inspection Program: The Heavy-Duty Vehicle Inspection Program (HDVIP) program requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering, and engine certification label compliance. Any heavy-duty vehicle traveling in California, including vehicles registered in other states and foreign countries, may be tested. Tests are performed by CARB inspection teams at border crossings, CHP weigh stations, fleet facilities, and randomly selected roadside locations. Owners of trucks and buses found in violation are subject to minimum penalties starting at $300 per violation. Also, the new HD I/M program, which started in January 2023, requires truck owners to take their truck into a certified inspector to verify that the emissions meet the 2010 engine standards, and to make sure the emission systems are running properly. The owner then must report the results to DMV. If the owner fails to do so, there will be hold on that truck's registration at DMV.

HDVIP-Emission Control Label: Several CARB diesel regulations require specific engine information, such as engine model year and engine family name, which is available from the emission control label (ECL) that is attached to your vehicle. All heavy-duty vehicles must have the ECL properly affixed on the engine. The ECL must be legible, maintained at the location originally installed by the engine manufacturer, and correspond to the engine serial number stamped on the engine.

HDVIP-Smoke Opacity: All heavy-duty diesel-powered vehicles must meet the applicable model year opacity standards with higher standards required for vehicles with diesel particulate filters installed.

HDVIP-Tampering: CARB enforces against vehicle owners (consumers) that have violated the law by tampering, modifying, or installing illegal parts on emission-controlled vehicles operated on a public highway.

Idling: Idling and opacity inspections are performed to ensure a heavy-duty vehicle (HDV) is compliant with emission standards and is not violating CARB's Idling regulation. Idling for more than five minutes is prohibited unless the HDV is certified clean idle, and the vehicle is more than 100 feet away from a school or restricted area (exceptions apply). Vehicle owners and drivers in violation are subject to minimum penalties starting at $300 per violation and up to $1000 per day.

Off-Road Construction Equipment (Off-Road Regulation): Construction equipment is a major contributor to air pollution, especially when large construction projects are adjacent to neighborhoods. To address this source of air pollution, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. The off-road regulation requires off-road fleets to meet fleet average emission standards and be equipped with Best Available Control Technology (a few specific exceptions apply).

Smart Way: The Tractor-Trailer Greenhouse Gas Regulation requires 53-foot or longer dry van or refrigerated van trailers and the tractors that pull them on California highways to use certain equipment that the U.S. Environmental Protection Agency Smart Way program has verified or designated to meet their efficiency standards.
Statewide Truck and Bus: The Statewide Truck and Bus regulation requires diesel trucks with a Gross Vehicle Weight

Rating (GVWR) greater than 14,000 pounds that operate in California to install diesel particulate filters or replace older engines with cleaner engine technology on a schedule based on the model year of the engine and GVWR.
Transport Refrigeration Unit: Transport Refrigeration Units (TRUs) are refrigeration systems powered by diesel internal combustion engines designed to refrigerate or heat perishable products that are transported in various containers, including semi-trailers, truck vans, shipping containers, and rail cars. Since diesel particulate matter has been identified as a toxic air contaminant, CARB adopted an Airborne Toxic Control Measure for TRUs and TRU generator sets. CARB staff inspect TRUs to ensure that the units are meeting labeling and in-use performance standards identified in the TRU regulation.

Consumer Goods Program descriptions

Composite Wood Products: CARB's Airborne Toxic Control Measure to control formaldehyde emissions from composite wood specifically focuses on three products: hardwood plywood, particleboard, and medium density fiberboard. Investigators in the Composite Wood Products program purchase samples of regulated products from outlets all over California. They inspect products and packaging for compliance with labeling requirements and send selected products to the laboratory for testing.
Consumer Products: Consumer Products are chemically formulated products used by household and institutional consumers. Some examples are detergents, cleaning compounds; polishes, floor finishes; cosmetics and personal care products; home, lawn, and garden products; disinfectants and sanitizers; aerosol paints and automotive specialty products. Consumer Products do not include other paint products, furniture coatings, or architectural coatings. Investigators in the Consumer Products program purchase samples of regulated consumer products from outlets all over California. They inspect product containers for compliance with registration and dating requirements and send selected products to the laboratory for testing.

Motor Vehicle Fuels Enforcement Program description

CARB's Motor Vehicle Fuels Enforcement program is the inspection of California gasoline and diesel fuel at production, transport, and dispensing facilities. CARB Fuels Inspectors conduct frequent, unannounced inspections of refineries, service stations, distribution and storage, bulk purchaser, and consumer facilities throughout the State to obtain samples of gasoline and diesel fuels. The samples are then analyzed in the Mobile Fuels Laboratory. The laboratory analyzes gasoline fuel for vapor pressure, distillation temperatures, total aromatics, olefins, and oxygen, benzene, and sulfur contents. Diesel fuel is analyzed for sulfur, aromatic hydrocarbon content, and polynuclear aromatic hydrocarbon content.

Other mobile enforcement program descriptions

HFC-134a Refrigerant: This regulation applies to the sale, use, and disposal of small containers of automotive refrigerant with a Global Warming Potential value greater than 150. The regulation achieves emission reductions through implementation of four requirements: 1) use of a self-sealing valve on the container, 2) improved labeling instructions, 3) a deposit and recycling program for small containers, and 4) an education program that emphasizes best practices for vehicle recharging. This regulation went into effect on January 1, 2010, and has been improved through amendments over the years. The latest amendment to the regulation was approved on April 13, 2017.

Dealer and Fleet Tampering: CARB enforces against any manufacturer, wholesaler, distributor, dealer, installer, retailer and/or repair shop or facility if they offered for sale or sold an uncertified vehicle, an illegally modified vehicle, or an illegal part, or installed an illegal part on an emission-controlled vehicle that is operated on a public highway. In addition, CARB enforces against commercial fleets that operate vehicles in violation of the law through tampering, modifying, or installing illegal parts on emission-controlled vehicles.

CARB enforcement resources

Enforcement Data Visualization System (EDVS): To help communities better understand CARB's enforcement efforts, provide community members a user-friendly way to access CARB enforcement information, and to facilitate the development of community emissions reduction programs, CARB's Enforcement Division developed EDVS for users to visualize CARB's enforcement activities across the state, including field inspections, case settlements, and SEPs on a map interface. https://webmaps.arb.ca.gov/edvs/

Annual Reports: Historically, CARB releases an annual enforcement report that highlights its enforcement efforts across the state including in disadvantaged communities, summarizes recently closed cases, assess compliance status in several programs, and provides detailed statistics about enforcement related program activities. CARB is currently reimagining that process and will have several updates over the year. https://ww2.arb.ca.gov/resources/documents/enforcement-reports

APPENDIX B: OVERVIEW OF CALIFORNIA AIR RESOURCES BOARD'S STATEWIDE ACTIONS

Community-scale air pollution exposure is caused by many factors, including the cumulative impacts of multiple pollution sources. Effective solutions require multiple strategies at both the statewide and local levels 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 recent State Strategy for the State Implementation Plan,[45] California's 2022 Climate Change Scoping Plan,[46] the California Sustainable Freight Action Plan, the Short-Lived Climate Pollutants Reduction Strategy,[47] and the 2020 Mobile Source Strategy,[48] along with a suite of incentive programs. CARB is continuing to develop air quality and climate plans that will further reduce emissions. The Community Air Protection Blueprint 2.0 contains additional strategy implementation guidance to reduce emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden, and reflects the experience and lessons learned from the first years of the program development and implementation.[49] Blueprint 2.0 further identifies 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 statewide actions CARB has taken to reduce emissions statewide. It also highlights specific actions that address areas of concern identified by the International Border Community Steering Committee.

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

While CARB is responsible for program oversight, some programs are implemented in partnership with local air districts. Examples of CARB incentive programs include:[50]

- Carl Moyer Memorial Air Quality Standards Attainment Program
- The Community Air Protection Incentives85F are implemented by the air district through this program,
- Proposition 1B: Goods Movement Emission Reduction Program,
- Funding Agricultural Replacement Measures for Emission Reductions Program, and
- Low Carbon Transportation Investments and Air Quality Improvement Program (which includes the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project).

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 initial community selection in 2018, the Legislature directed that CAP incentives appropriated in Fiscal Year (FY) 2017-18 be focused on disadvantaged and low-income communities 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.

Between FYs 2017-18 and 2022-23, the Legislature appropriated $1,162 million in CAP incentives (Table 3).[51] 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: 70 percent in and benefiting disadvantaged communities and 80 percent in and benefiting disadvantaged or low-income communities. Through May of 2023, air districts have expended over $465 million dollars with $184 million in AB617 communities. The majority of the remaining $281 million in CAP incentives expended (94%) have been in other disadvantaged and low-income communities across the State.[52]

To expand on initial funding options in the CAP Guidelines, CARB developed a process for the air districts to fund new projects responsive to community priorities and to expand stationary source incentives. CARB staff worked with the air districts and California Air Pollution Control Officers Association (CAPCOA) through late 2019 and early 2020 to ensure the process maximized flexibility to support projects requested 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.

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 to 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.

Several innovative incentive projects were initiated in 2022 and funded by Community Air Protection Program Incentives. San Joaquin Valley Air Pollution Control District (SJVAPCD) has numerous Community Identified Projects totaling over $3 million, including wood stove replacements, EV charging infrastructure, dust harvesters, lawn and garden, and alternatives to agricultural burning. With support from Portside Environmental Justice Neighborhoods' CSC, SDAPCD proposed, and CARB approved, an electric truck pilot project for Portside to incentivize e-truck purchases without requiring scrapping old trucks as a Community Air Protection Incentives – Community Identified Project. On behalf of their AB 617 communities, South Coast Air Quality Management District (SCAQMD) has submitted a Draft AB 617 Truck Incentives Workplan to CARB for review that will provide opportunities for fleet owners to assess the suitability of zero-emission or near-zero-emission medium- or heavy-duty trucks and supporting infrastructure by allowing them to test drive the cleaner trucks for some time.

Staff recognizes that other communities, particularly those that have been consistently nominated but not yet selected for participation in AB 617, could likewise benefit from their air districts implementing these kinds of innovative new projects. Staff is currently working with the air districts to revise the CAP Guidelines to incorporate many of these approved community-identified projects as new chapters eligible for any air district to implement in their most heavily impacted communities. New chapters will include incentives for agency partnerships, vegetative barriers and urban greening, emergency diesel generator replacement, paving, sidewalk, and bike path projects, dial-a-ride vehicle replacement, alternatives to agricultural burning, and low-dust nut harvesters. Staff will continue to work with the air districts to develop these revisions, and plan to publish these revised Guidelines in Spring 2024.

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 through rules and permitting programs within their regions (with the exception of consumer products in most cases).
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 is to adopt measures to reduce emissions of toxic air contaminants from mobile and non-mobile sources, known as Airborne Toxic Control Measures (ATCM).[53] These regulatory measures include process requirements, emissions limits, or technology requirements. Additionally, CARB implements the Statewide Air Toxics "Hot Spots" Program[54] 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. CARB provides technical guidance to support smaller businesses in 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 the introduction of cleaner locomotives in the South Coast Air Basin is an example of an enforceable agreement.

CARB Actions Related to the International Border Community
This section highlights CARB actions that specifically relate to the International Border Community actions identified by the IBCSC. This list should not be interpreted as 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. More information on CARB's regulatory process can be found in the Online Resource Center.[55] The list of CARB actions and their anticipated benefits in current AB 617 communities is also available on the Program CommunityHub.[56]

Recently Adopted CARB Regulations
In August 2022, CARB approved the Advanced Clean Fleets regulation.[57] The Advanced Clean Fleets regulation is part of a comprehensive strategy that would, consistent with public health needs, accelerate the widespread adoption of zero-emission vehicles (ZEV) in the medium- and heavy-duty truck sector and in light-duty package delivery vehicles. The ACF regulation would require certain fleets to deploy ZEVs starting in 2024 and would establish a clear end date for new medium- and heavy-duty internal combustion engine (ICE) vehicle sales in 2040. In November 2022, CARB approved the Advanced Clean Cars II regulations.[58] The Advanced Clean Cars II regulations will rapidly scale down

light-duty passenger car, pickup truck, and SUV emissions starting with the 2026 model year through 2035. The regulations are two-pronged. First, it amends the Zero-emission Vehicle Regulation to require an increasing number of zero-emission vehicles and relies on currently available advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric, and plug-in hybrid electric vehicles, to meet air quality and climate change emissions standards. These amendments support Governor Newsom's 2020 Executive Order N-79-20, which requires all new passenger vehicles sold in California to be zero emissions by 2035. Second, the Low-emission Vehicle Regulations were amended to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions. The regulations will substantially reduce air pollutants that threaten public health and cause climate change. While further developing the zero-emission vehicle market, the regulations also take additional steps to clean up internal combustion engines and will provide public health benefits of at least $12 billion over the life of the regulations by reducing premature deaths, hospitalizations, and lost workdays associated with exposure to air pollution. In December 2022, CARB approved amendments to the Commercial Harbor Craft (CHC) regulation.[59]

CARB has regulated commercial harbor craft since 2009. By the end of 2022, the Current Regulation will require Tier 2 or 3 engines on a subset of harbor craft (excursion vessels, ferries, tugboats, crew and supply vessels, barges, and dredges). The 2022 Amended CHC Regulation adds or expands requirements for vessels regarding emissions, reporting, fuel use, idling, and facility power, among others. Some of these new requirements go into effect as early as January 1, 2023. Harbor craft are in the top three emitting categories at seaports, contributing more diesel particulate matter emissions than trucks in 2023 at the San Pedro Bay Ports. The amendments are expected to reduce diesel PM from covered vessels by 89 percent and NOx by 54 percent at full implementation. This is expected to avoid 531 premature deaths, 161 hospital admissions, and 236 emergency room visits, providing $5.25 billion in benefits versus $1.98 billion in costs statewide.

In April 2023, CARB approved the In-Use Locomotive regulation.[60] The In-Use Locomotive Regulation (Regulation) will achieve emission reductions from diesel-powered locomotives and increase the use of zero-emission (ZE) technology. The Regulation will help meet California's public health, air quality, and climate goals by reducing criteria pollutants, toxic air contaminants, and greenhouse gas emissions for locomotives in use. In May 2023, CARB adopted the Hexavalent Chromium Airborne Toxic Control Measure (ATCM).[61] The ATCM results in the most stringent regulation of hexavalent chromium emissions from the chrome plating industry (compared to federal standards and District rules), with the goal of eliminating toxic hexavalent chromium emissions from the chrome plating industry in California over time.

Future and Upcoming CARB Rulemakings

2025 Mobile Source Strategy - CARB staff is initiating development of the 2025 Mobile Source Strategy with a plan to build on the integrated planning approach used in development of the 2016 and 2020 Mobile Source Strategies to identify the level of transition to cleaner mobile source technologies needed to achieve all of California's air quality and climate targets. Mobile sources and the fossil fuels that power them continue to contribute a majority of emissions of diesel particulate matter as well as smog- and particulate-forming pollutants such as oxides of nitrogen (NOx), and the largest portion of greenhouse gas emissions in California. Staff is conducting outreach to identify interested parties and initiating communication as early as possible in order to establish ongoing engagement and dialogue for interested parties to provide input and feedback throughout the process of development for the 2025 Mobile Source Strategy. https://ww2.arb.ca.gov/resources/documents/2025-mobile-source-strategy

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 prior 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.

Commercial Cooking Suggested Control Measure - This strategy consists of a two-phase process to evaluate California's current emission reduction requirements for commercial cooking operations that prepare food for human consumption and, if necessary, make improvements to achieve additional reductions in particulate matter 10 microns or less in diameter (PM10), particulate matter 2.5 microns or less in diameter (PM2.5) and volatile organic compound emissions that contribute to ozone formation. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/coatings/architectural-coatings/suggested-control-measure

Composite Wood Products Control Measure Amendments - This strategy will amend the CARB Composite Wood Products Airborne Toxic Control Measure (ATCM), approved in 2007. The Composite Wood Products ATCM established formaldehyde emission standards for three types of composite wood products (hardwood plywood, particleboard, and medium-density fiberboard) and requires that all consumer goods that contain such materials (e.g., flooring, cabinets, furniture) destined for sale in California must comply with the Composite Wood Products ATCM. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/composite-wood-products-program
Consumer Products Standards - The primary goal of this measure is to help attain federal ozone standards in the South Coast by addressing projected growth in consumer product emissions. While this measure focuses on attaining federal air quality standards in the South Coast, where nearly 15 million residents face the most extreme and persistently high ambient ozone levels in the nation, it will also facilitate the attainment of State and federal air quality standards in other California regions. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/consumer-products-program
Future Measures for Aviation Emissions Reductions - The primary goal of future measures for aviation is to reduce emissions from airport and aircraft-related activities. The identified emission sources for the aviation sector are main aircraft engines, auxiliary power units (APU), and airport ground transportation. For more information, visit: https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf

Future Measures for Ocean-Going Vessel Emissions Reductions - The primary goal of future measures for OGVs is to further reduce emissions from OGVs that are transiting, maneuvering, or anchoring in Regulated California Waters (RCW) and while docking at berth in California seaports. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessel-fuel-regulation

Ocean Going Vessels In-Transit - The 2020 At-Berth Regulation was adopted by CARB's Board in August 2020. The At-Berth Regulation expands existing regulations by adding more types of visits and two new vessel categories: auto carriers and tankers and the new ports and terminals that receive these vessel types. The At-Berth Regulation Interim Evaluation Report (published on December 1, 2022) and provides CARB's Board and the public with an implementation status update for the At-Berth Regulation. One of the key recommendations from the Report is to pursue future reductions from ocean-going vessels while they are transiting, maneuvering, and anchoring, as most emissions from ocean-going vessels occur while they are transiting. CARB will be performing an ocean-going vessel technology assessment during the next 18 months that will explore the best strategies for further reducing emissions from ocean-going vessels (including in transit). Off-Road Zero-Emission Targeted Manufacturer Rule - The goal of the Off-Road Zero-Emission Targeted Manufacturer Rule is to achieve criteria pollutant and GHG emissions reductions by accelerating the development and production of zero-emission off-road equipment and powertrains. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation

Spark-Ignition Marine Engine Standards - The goal of this measure is to reduce emissions from new spark-ignition (SI) marine engines by adopting more stringent exhaust standards for outboard and personal watercraft, which currently do not use catalyst control technologies. For more information, visit: https://ww2.arb.ca.gov/spark-ignition-marine-engine-and-watercraft-simesimw-regulatory-and-certification-documents

Tier 5 Off-Road Vehicles and Equipment - This measure is to establish more stringent standards and test procedures for new, off-road compression-ignition (CI) engines to reduce NOx, PM, and carbon (CO2) emissions (referred to as Tier 5) for all off-road engine power categories, including those that do not currently utilize exhaust after-treatment such as diesel particulate filters (DPF) and selective catalytic reduction (SCR). For more information, visit: https://ww2.arb.ca.gov/our-work/programs/tier5/about

Transport Refrigeration Unit Regulations, Part 2 – Transport refrigeration units congregate at distribution centers, rail yards, and other facilities, resulting in the potential for health risks to those that live and work nearby. In February 2022, CARB adopted amendments to the Transportation Refrigeration Unit Airborne Toxic Control Measures (TRU ATCM). The amendments include requirements for the transition of diesel-powered truck TRUs to zero-emission, a particulate matter emission standard for newly manufactured non-truck TRUs, lower global warming potential refrigerant, facility registration, and reporting expanded TRU reporting and labeling, and fees. Staff are assessing zero emission options for non-truck TRUs and plan to take a second rulemaking (Part 2) to the Board for consideration in 2025. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/new-transport-refrigeration-unit-regulation

Zero-Emission Appliance Standards – Zero-emission standards for new appliances are in alignment with the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) as they would reduce building-related greenhouse gas (GHG) emissions. These standards would also assist California with meeting State and federal air quality standards and achieving public health benefits because they would also provide important smog-forming NOx emission reductions. CARB committed to exploring developing and proposing zero-emission GHG standards for new space and water heaters sold in California as part of the 2022 State Strategy for the State Implementation Plan (2022 State SIP Strategy) adopted in September 2022. For more information, visit: https://ww2.arb.ca.gov/our-work/programs/zero-emission-appliance-standards

Zero-Emissions Truck Measure - This measure would seek to accelerate the number of zero-emissions (ZE) trucks beyond existing measures (including the proposed Advanced Clean Fleets regulation). This strategy is a modification of the publicly suggested On-Road Heavy-Duty Vehicle Useful Life Regulation. The already adopted ACT regulation will result in almost 420,000 ZE trucks on the road by 2037, and the proposed Advanced Clean Fleets (ACF) regulation would increase the number of ZE trucks by another 220,000 to a total of 640,000. However, in 2037, even after the implementation of the ACT and ACF regulations, about 480,000 heavy-duty combustion-powered trucks will still be on the road. In this modified approach, staff would seek to upgrade these remaining heavy-duty combustion trucks to new or used ZE trucks rather than to trucks with cleaner combustion engines. For more information, visit: https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf

Estimated Emission Reductions from CARB Measures

It is important to note that the Statewide regulations provided in this CERP are in the early phases of development, and their adoption and implementation timelines are not well established. As a result, a draft emissions inventory, and estimated benefits are not yet available for many regulations still in development. As these emissions inventories are developed overtime, CARB staff will provide estimated benefits in future updates.

ENDNOTES

1 The Just Wage Initiative | Center for Social Concerns (nd.edu) https://socialconcerns.nd.edu/justwagetool/

2 Final Draft: Community Air Protection Program Blueprint 2.0 (ca.gov), page 5-6. https://ww2.arb.ca.gov/sites/default/files/2023-09/BP2.0_Final_Draft_9.24.2023_FD.pdf

3 Senate Bill (SB) 535 charges the California Environmental Protection Agency (CalEPA) with the responsibility to designate "disadvantaged communities". CalEPA relied upon the California Communities Environmental Health Screening Tool (CalEnviroScreen), a mapping tool developed by the Office of Environmental Health Hazard Assessment (OEHHA). CalEPA generally defines communities in terms of census tracts and identifies four types of geographic areas as disadvantaged: (1) census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0; (2) census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores; (3) census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0; (4) and areas under the control of federally recognized Tribes.

4 2021 American Community Survey 5-Year Estimates

5 CalEnviroScreen 4.0 Indicator Maps (arcgis.com)

6 EJScreen (epa.gov)

7 Border Crossing Entry Data | Tyler Data & Insights (bts.gov) https://data.bts.gov/Research-and-Statistics/Border-Crossing-Entry-Data/keg4-3bc2/data

8 U.S. adds more commercial lanes at Otay Mesa as expansion project continues - The San Diego Union-Tribune (sandiegouniontribune.com)

9 Border Crossing Entry Data | Tyler Data & Insights (bts.gov) https://data.bts.gov/Research-and-Statistics/Border-Crossing-Entry-Data/keg4-3bc2/data

10 PM2.5 Monitoring at the San Ysidro Port-of-Entry (sdapcd.org) https://www.sdapcd.org/content/dam/sdapcd/documents/monitoring/San-Ysidro-Project-Report.pdf

11 Resurgent maquiladoras are making Tijuana a boom town all over again | KPBS Public Media https://www.kpbs.org/news/border-immigration/2022/01/05/resurgent-maquiladoras-are-making-tijuana-a-boom-town-all-over-again

12 County supervisors push for federal emergency on Tijuana River pollution | KPBS Public Media https://www.kpbs.org/news/environment/2023/07/05/county-supervisors-push-for-federal-emergency-on-tijuana-river-pollution

13 https://www.epa.gov/criteria-air-pollutants

14 By federal approval and precedent, California's emission inventory uses Reactive Organic Gases (ROG) instead of U.S. EPA's Volatile Organic Compounds (VOC), although they are considered essentially interchangeable. ROG, in general, represent a slightly broader group of compounds than those in U.S. EPA's VOC list.

15 https://ww2.arb.ca.gov/sites/default/files/2020-07/AB%20617%20Calendar%20Years%20for%20Community%20Planning%20Emission%20Inventories%202020-02-26.pdf

16 Resources for the health impacts of Air Pollutants.
https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health
https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health
https://ww2.arb.ca.gov/resources/lead-and-health
https://ww2.arb.ca.gov/resources/common-air-pollutants
https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health
https://ww2.arb.ca.gov/resources/sulfate-and-health

https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health
https://ww2.arb.ca.gov/resources/visibility-reducing-particles-and-health
https://ww2.arb.ca.gov/sites/default/files/2020-03/aaqs2_0.pdf
://ww2.arb.ca.gov/sites/default/files/2020-07/AB%20617%20Calendar%20Years%20for%20Community%20Planning%20Emission%20Inventories%202020-02-26.pdf
https://www.epa.gov/criteria-air-pollutants
https://ww2.arb.ca.gov/resources/ozone-and-health
https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health
https://ww2.arb.ca.gov/resources/sulfate-and-health

17 Ground level ozone is a regional air pollutant that is formed through complex chemical reactions in the atmosphere between NOx and ROG. It is not emitted directly into the air, unlike PM2.5 which can both be directly emitted (primary particles such as road dust, diesel soot, combustion products, and other sources of fine particles), and also be formed in the atmosphere through chemical reactions with NOx, SOx, ROG, and ammonia (secondary particles such as sulfates, nitrates, and complex organic carbon compounds). As such, ozone and secondary PM2.5 cannot be directly presented in an emissions inventory.

18 Business-as-usual, without considering effects of any proposed CERP strategies.

19 it is very important to note that construction based PM emissions in our current inventory are calculated through some really old methodologies and activity data, and then these PM emissions are then used to estimate toxics components through speciation profiles (again with methods and formulae), so there is a lot uncertainty in these estimates. CARB is planning to update several area source methodologies in the coming year, and when done an updated inventory for this community will be developed during CERP implementation. Ground level ozone is a regional air pollutant that is formed through complex chemical reactions in the atmosphere between NOx and ROG. It is not emitted directly into the air, unlike PM2.5 which can both be directly emitted (primary particles such as road dust, diesel soot, combustion products, and other sources of fine particles), and also be formed in the atmosphere through chemical reactions with NOx, SOx, ROG, and ammonia (secondary particles such as sulfates, nitrates, and complex organic carbon compounds). As such, ozone and secondary PM2.5 cannot be directly presented in an emissions inventory.

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22 CARB is planning to update several area source methodologies in the coming year to reflect current science and up to date activity data, and when that is done CARB will be able to provide an updated inventory for this community during CERP implementation.

23 Home - Participatory Budgeting Project https://www.participatorybudgeting.org/

24 Those most vulnerable to air pollution (children, elderly, chronically ill, etc.) are also known as “sensitive receptors” in air quality policy spaces.

25 Air Quality Flag Program Main Page | AirNow.gov https://www.airnow.gov/air-quality-flag-program/

26 SDAPCD administers a Supplemental Environmental Project (SEP) Program to evaluate community-based projects that can be funded from a portion of the penalties received during settlement of enforcement actions. The SEP Program can improve public health, reduce pollution, increase environmental compliance, and bring public awareness to neighborhoods most burdened by environmental harm. SDAPCD’s SEP Program Policy establishes the process for selection of SEPs and how SDAPCD will oversee implementation of SEPs that are included in settlement agreements. Eligible SEP proposals must promote public health, pollution prevention and reduction, environmental protection, or environmental compliance and must go beyond any federal, state, and local

requirements. The purpose of a SEP is to improve public health, prevent or reduce pollution, enhance environmental protection and environmental compliance, and/or bring public awareness to neighborhoods most burdened by environmental harm. A SEP can include but is not limited to an environmental clean-up, air pollution reduction, air pollution monitoring, or public outreach that focuses on the elimination or reduction of air contaminant emissions. Supplemental Environmental Projects (sdapcd.org)

27 The TDM Ordinance would require developments (business/commercial and potentially residential) of a certain size to integrate sustainable transportation options and incentives to minimize vehicle trips they generate. TDM programs aim to reduce GHG and VMT by incentivizing mode shift from driving alone to sustainable modes such as public transportation, vanpools, walking and biking, and telecommuting. Such an ordinance in the San Diego region would also need specific tailoring for businesses that employ Mexican residents and conduct cross border commerce. See 1993 City of Los Angeles TDM Ordinance here: TDM_Fact_Sheet_updated_6.2022.pdf (lacity.org)

28 Actions 1-12 from the California-Baja California Border Master Plan.

29 County of San Diego Regional Decarbonization Framework

30 Currently, there are unlicensed and uncertified private fleets providing this service in the area and are creating more disruption that may be causing more traffic. These private fleets are capitalizing on a confused public and filling the gap for a service that currently doesn't exist.

31 Strategy from the County of San Diego Regional Decarbonization Framework.

32 Action 1 is from the California-Baja California Border Master Plan and actions 2-6 is from the San Diego and Imperial Counties Sustainable Freight Implementation Strategy; SR 11 Corridor: SR 125 to International Border - Otay Mesa Port of Entry.

33 Action 1 is from the California-Baja California Border Master Plan; Action 2-5 is from Zero Emission Freight Transition white paper and San Diego and Imperial Counties Sustainable Freight Implementation Strategy; SR 11 Corridor: SR 125 to International Border - Otay Mesa Port of Entry; and Action 6 is from the San Diego and Imperial County Sustainable Freight Implementation Strateg.

34 Actions from San Diego and Imperial County Sustainable Freight Implementation Strategy

35 md-hd-zev-draft-blueprint-2023-04-01.pdf (sandag.org)

36 An Indirect Source Rule would regulate a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution. Explore Potential actions such as Low NOx/ ZE Truck Acquisition, Low NOx/ ZE Truck Visits, ZE Yard Trucks Acquisition/Use, ZE Charging or Fueling Infrastructure, Solar Panel System Installation and Use, Air Filtration Systems, Mitigation Fee, etc. This will be based on ACF registry. The reasoning is that once we have a critical mass of electric HD trucks deployed, the impact of warehouse activity on regional air quality will be reduced.

37 More information can be found at the Zero Emission Freight Transition white paper

38 Attainment Status (sdapcd.org) https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html

39 Emissions by Air District | California Air Resources Board https://ww2.arb.ca.gov/applications/emissions-air-district

40 Overview: Diesel Exhaust & Health | California Air Resources Board https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health

41 Supplemental Environmental Projects (sdapcd.org) https://www.sdapcd.org/content/sdapcd/compliance/violation-information/supplemental-environmental-projects.html

42 See Public Resources Code Section 21000, et seq.

43 See 14 California Code of Regulations Section 15000, et seq. (“CEQA Guidelines”).

44 https://www.sdapcd.org/content/sdapcd/planning/ceqa.html

45 California Air Resources Board, 2022 State Strategy for the State Implementation Plan, September 12, 2022, available at: https://ww2.arb.ca.gov/resources/documents/2022-state-strategy-state-implementation-plan-2022-state-sip-strategy

46 California Air Resources Board, California's 2017 Climate Change Scoping Plan, September 2022, available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents

47 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

48 California Air Resources Board, Short-Lived Climate Pollutant Reduction Strategy, March 2017, available at: https://ww2.arb.ca.gov/resources/documents/slcp-strategy-final

49 California Air Resources Board, Community Air Protection Program Statewide Strategy and Implementation Guidance Blueprint 2.0, October, 2023, available at:

50 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.
For more information on the Community Air Protection Incentives, visit: https://ww3.arb.ca.gov/msprog/cap/capfunds.htm
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.
For more information on the Funding Agricultural Replacement Measures for Emission Reductions Program, visit: https://ww2.arb.ca.gov/our-work/programs/farmer-program.
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

51 California Air Resources Board, AB 617 Budget Frequently Asked Questions – Summary of AB 617 Funding, available at: https://ww2.arb.ca.gov/sites/default/files/2023-05/AB617%20Funding%20Questions_update%20Final_5.23.23.pdf

52 Disadvantaged and low-income communities as defined by Assembly Bill 1550 (Gomez, Chapter 369, Statutes of 2016), read more here: https://calepa.ca.gov/envjustice/ghginvest/

53 California Health and Safety Code § 39650 et seq.

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

55 Community Air Protection Program Resource Center: https://ww2.arb.ca.gov/ocap_resource_center

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

57 For more information on the Advanced Clean Fleets regulation, visit: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets and https://ww2.arb.ca.gov/resources/fact-sheets/commercial-goods-movement-through-land-ports-california

58 For more information on the Advanced Clean Cars II regulations, visit: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii

59 For more information on the Commercial Harbor Craft Amendments, visit: https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft

60 For more information on the In-Use Locomotive Regulation, visit: https://ww2.arb.ca.gov/our-work/programs/reducing-rail-emissions-california/locomotive-fact-sheets

61 For more information on the Hexavalent Chromium Airborne Toxic Control Measure, visit: https://ww2.arb.ca.gov/our-work/programs/chrome-plating-atcm

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