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# Appendix 5b:

## Mobile Sources

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## Introduction

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During the Community Steering Committee (CSC) meetings, the community co-leads helped lead discussions to identify air quality concerns and actions for this Community Emissions Reduction Plan (CERP). One of the concerns raised by the South Los Angeles (SLA) CSC is mobile sources, in particular, emissions from vehicles and equipment at construction and oil and gas sites. This appendix provides additional supporting information for Chapter 5b: Mobile Sources, including an overview of community impacts, emissions, and regulatory efforts. The overview of regulatory efforts includes a summary of regulatory authority, compliance and enforcement, and incentive efforts in addressing emissions from and exposure to mobile sources.

## Community Impacts from Mobile Sources

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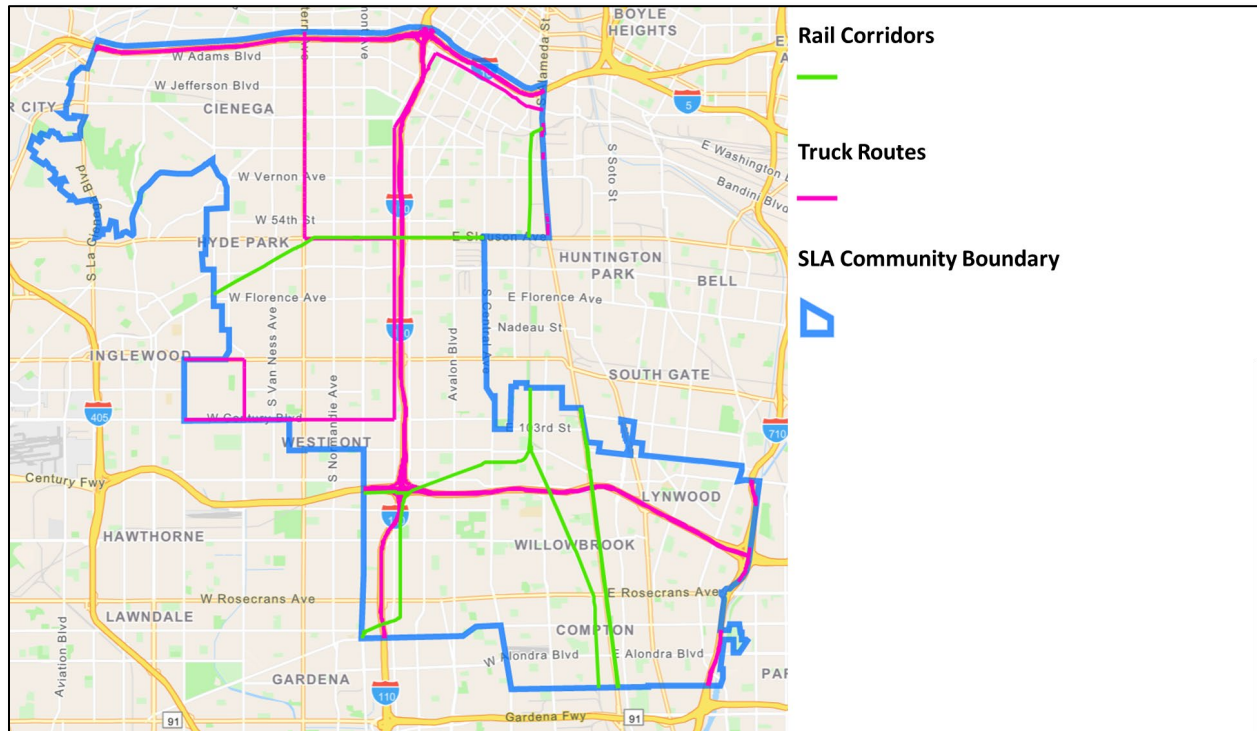
The SLA community is bounded by Interstate 10 (I-10) to the north, Interstate 710 (I-710) and the Alameda Corridor to the east, and State Route 91 (SR-91) to the south, with Interstate 105 (I-105), Interstate 110 (I-110) and the Slauson Corridor crossing through the community. Various types of mobile sources, including light, medium, and heavy-duty vehicles travel along these routes and expose residents to harmful air pollutants. Additionally, the I-710, I-110, and Alameda Corridor are vital transportation routes for goods movement out of the Ports of Los Angeles and Long Beach, which are the busiest container ports in the United States.<sup>1</sup> A daily average of approximately 246,000 vehicles transit along the I-110 and I-105 interchange, 328,000 vehicles transit along the I-10 and I-110 interchange, and 213,000 vehicles transit along the I-710 and I-105 interchange.<sup>2</sup> **Figure A5b-1** provides a map of the rail corridors and truck routes in the SLA Community.



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<sup>1</sup> Southern California Association of Governments (SCAG), Industrial Warehousing in the SCAG Region, [https://scag.ca.gov/sites/main/files/file-attachments/task2\\_facilityinventory.pdf?1604268149](https://scag.ca.gov/sites/main/files/file-attachments/task2_facilityinventory.pdf?1604268149)

<sup>2</sup> Caltrans, Traffic Census Program, <https://dot.ca.gov/programs/traffic-operations/census>

**Figure A5b-1: Truck Routes and Rail Corridors in SLA**

## Emissions from Mobile Sources

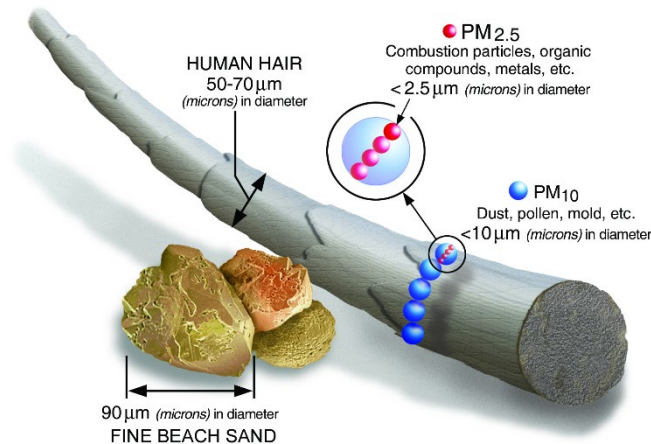
Emissions information for mobile sources in SLA is available in Chapter 2d: Emissions and Source Attribution and Appendix 2d: Source Attribution. This section will highlight emissions from trucks, buses, and locomotives since these sources were highlighted as concerns by the community.

Mobile sources are categorized into two main groups: on-road mobile sources and off-road mobile sources. On-road mobile sources generally includes motor vehicles that travel on roads and highways such as trucks, buses, and cars. Off-road mobile sources include a wide variety of non-road mobile sources such as construction equipment, marine vessels, locomotives, and aircrafts. Fugitive emissions from construction sites are not quantifiable, but construction operations and projects may be subject to the California Air Resources Board (CARB) and South Coast Air Quality Management District (AQMD) rules and regulations. Mobile sources that are fueled with fossil fuels such as gasoline, diesel, or natural gas contribute to emissions of fine particulate matter (PM<sub>2.5</sub>), particulate matter (PM<sub>10</sub>), volatile organic compounds (VOCs), and nitrogen oxides (NO<sub>x</sub>). PM<sub>2.5</sub> are particles smaller than 2.5 microns and PM<sub>10</sub> are particles smaller than 10 microns, both PM<sub>2.5</sub> and PM<sub>10</sub> can be inhaled deep into the lungs and cause health problems.<sup>3</sup> **Figure A5b-2** provides the sizes of PM<sub>2.5</sub> and PM<sub>10</sub> relative to human hair and

<sup>3</sup> CARB, Inhalable Particulate Matter and Health (PM<sub>2.5</sub> and PM<sub>10</sub>), <https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health>

fine beach sand. VOCs, such as acetone, benzene, and formaldehyde, are a group of gases that contribute to forming ozone (smog). NO<sub>x</sub> is a family of gases that are highly reactive with other pollutants to form both ozone and PM<sub>2.5</sub>. Breathing ozone can damage the respiratory system.<sup>4</sup>

**Figure A5b-2: Particulate Matter Size Comparison (PM<sub>2.5</sub> and PM<sub>10</sub>)<sup>5</sup>**



Diesel Particulate Matter (DPM) is a class of particulate matter which is a toxic air contaminant (TAC) that comes from diesel exhaust and is a top contributor to TAC cancer risks.<sup>6</sup> In 1998, CARB designated diesel particulate from internal combustion engines a carcinogen. **Figure A5b-3** shows the top five mobile sources of DPM in SLA. Based on South Coast AQMD's MATES V study,<sup>7</sup> released in 2021, DPM emissions account for about 67 percent of the cancer risks in the South Coast Air Basin (Basin). In 2019, the top five mobile sources of DPM in SLA are shown in **Figure A5b-3**.

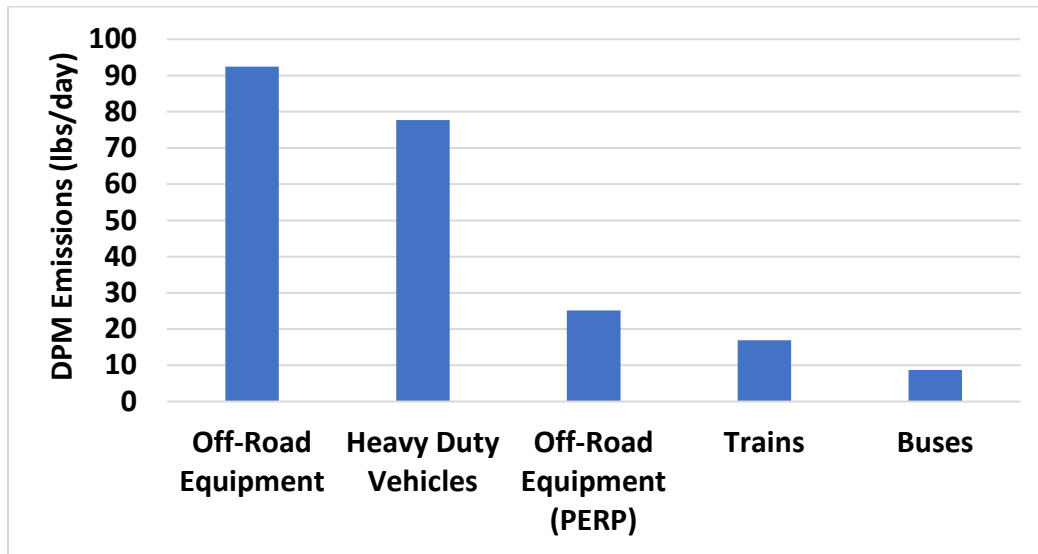
<sup>4</sup> South Coast AQMD, Smog and Health – Historical Information, <https://www.aqmd.gov/home/research/publications/smog-and-health-historical-info>

<sup>5</sup> United States Environmental Protection Agency (U.S. EPA), Particulate Matter (PM) Basics, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>

<sup>6</sup> CARB, Overview: Diesel Exhaust & Health, <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>

<sup>7</sup> South Coast AQMD, MATES V Multiple Air Toxics Exposure Study, <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v>

**Figure A5b-3: Top Five Mobile Sources of DPM in SLA<sup>8</sup>**



\* Off-road equipment includes but is not limited to transport refrigeration units (TRUs), cargo handling equipment, and construction equipment.

### On-Road Mobile Sources

Based on 2019 emissions data,<sup>8</sup> 40 percent of DPM emissions in SLA are from on-road mobile sources. **Table A5b-1** below provides an overview of emissions from on-road mobile sources in SLA. Within the category of on-road mobile sources, the largest sources of DPM emissions are from medium-heavy and heavy-heavy duty vehicles, which contribute to 45 percent and 35 percent, respectively, as highlighted yellow in **Table A5b-1**. Medium heavy-duty vehicles are trucks that are 14,001 to 33,000 pounds (**Figure A5b-4**); examples include commercial delivery trucks, beverage trucks, and school buses. Heavy heavy-duty vehicles are trucks over 33,000 pounds (**Figure A5b-4**); examples include freight trucks used to move shipping containers, cement trucks, dump trucks, and city transit buses.

<sup>8</sup> For more information related to source attribution emissions, please refer to Appendix 2d.

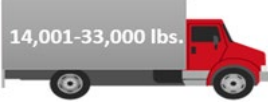

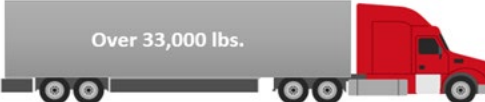

**Table A5b-1: Emissions from On-Road Mobile Sources in SLA in 2019<sup>8</sup>**

Emission Source	NOx (tpy)*	VOC (tpy)*	PM2.5 (tpy)*	PM10 (tpy)*	DPM (tpy)*
†Light and Medium-Duty Vehicles	838	930	123	290	0.71
†Light Heavy-Duty Vehicles	120	31	4.2	9.1	0.84
Medium Heavy-Duty Vehicles	259	17	12	18	7.5
Heavy-Heavy Duty Vehicles	421	16	8.1	13	5.9
Buses	137	14	5.7	12	1.4
Other	57	142	1.1	2.1	0.32
<b>Total On-Road Mobile Sources</b>	<b>1,832</b>	<b>1,150</b>	<b>154</b>	<b>344</b>	<b>17</b>

\*Emissions were calculated and presented in tons per day for criteria air pollutants and pounds per day for TACs in Chapter 2d and Appendix 2d

† Passenger cars and pickup trucks

**Figure A5b-4: General Truck Categories**

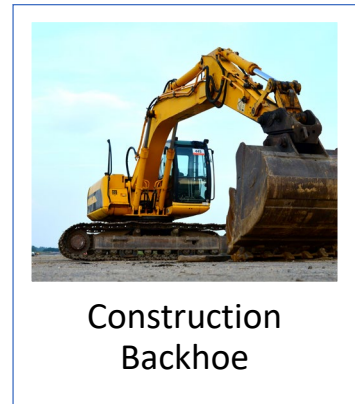
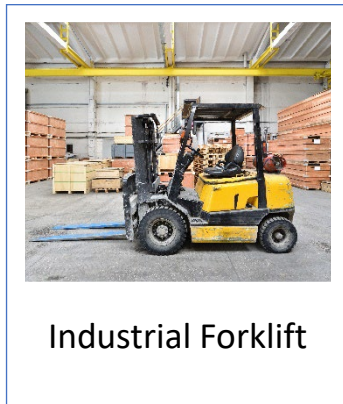
Category	Definition	Example
Medium Heavy-Duty	 <p>14,001-33,000 lbs.</p>	
Heavy Heavy-Duty	 <p>Over 33,000 lbs.</p>	

### Off-Road Mobile Sources

Based on 2019 emissions data,<sup>8</sup> 60 percent of DPM emissions in SLA are from off-road mobile sources which includes off-road equipment (e.g., TRUs, cargo handling equipment, and construction equipment), portable off-road equipment, and locomotives (i.e., trains) (**Figure A5b-5**). **Figure A5b-6** provides examples of portable off-road equipment, such as those that are registered in CARB’s portable equipment registration program (PERP) program.<sup>9</sup> **Table A5b-2** below provides an overview of emissions from off-road mobile sources in SLA.

<sup>9</sup> CARB, Portable Equipment Registration Program (PERP), <https://ww2.arb.ca.gov/our-work/programs/portable-equipment-registration-program-perp>

**Figure A5b-5: Examples of Off-Road Equipment**



**Figure A5b-6: Examples of PERP**

Portable Generator



Portable Air Compressor



Portable Pump



Auxilliary Engine for Crane



**Table A5b-2: Emissions from Off-Road Mobile Sources in SLA in 2019<sup>8</sup>**

Emissions Source	NO <sub>x</sub> (tpy)*	VOC (tpy)*	PM <sub>2.5</sub> (tpy)*	PM <sub>10</sub> (tpy)*	DPM (tpy)*
Trains	123	5.7	2.8	3.1	3.1
Off-Road Recreational Vehicles	0.05	8.9	0.0	0.01	0.0
Off-Road Equipment	574	852	29	34	17
Off-Road Equipment (PERP)	120	11	4.2	4.6	4.6
Other	1.0	143	1.3	1.7	0.0
<b>Total Off-Road Mobile Sources</b>	<b>818</b>	<b>1020</b>	<b>37</b>	<b>43</b>	<b>25</b>

\*Emissions were calculated and presented in tons per day for criteria air pollutants and pounds per day for TACs in Chapter 2d and Appendix 2d

Based on 2019 data,<sup>8</sup> locomotives contribute to 7.5 percent of the total DPM emissions in SLA. The SLA community boundary does not have any railyards,<sup>10</sup> but does include parts of the Alameda Corridor which is an express railway line that parallels Alameda Street and contains three rail tracks used by Burlington Northern and Santa Fe Railway (BNSF) and Union Pacific Railroad Company (UP) to transport goods to and from the Ports of Long Beach and Los Angeles. Approximately 40 trains with a volume of about 13,000 twenty-foot equivalent units (TEUs) travel through the Alameda Corridor daily.<sup>11</sup> Additionally, stations and rail lines for passenger rail services operated by Los Angeles Metro, Amtrak, and Metrolink run through the SLA community.

## Regulatory Efforts

### Regulatory Authority

The United States Environmental Protection Agency (U.S. EPA) establishes emission limits for mobile sources (on-road and off-road) by regulating both the composition of fuels and tailpipe emissions. The federal Clean Air Act authorizes the state of California (CARB) to set its own separate and stricter-than-federal vehicle emissions regulations to address air pollution; thus it has primary authority over on-road mobile sources.<sup>12</sup> South Coast AQMD has primary authority over stationary sources with limited authority over mobile sources through indirect sources (fixed facilities that attract mobile sources such as shopping centers, railyards, ports, and warehouses) and certain fleets. Therefore, efforts to address this air quality priority in the SLA community depends on collaboration with agencies that have direct authority over mobile sources, such as U.S. EPA and CARB. South Coast AQMD enforces some CARB mobile source regulations for which there are memorandums of agreements between the agencies or where express authority is given to air districts and written directly into CARB's regulations. South Coast AQMD's authority is limited to addressing indirect mobile sources (facilities that attract mobile sources, e.g.,

<sup>10</sup> CARB, Railyard Health Risk Assessments and Mitigation Measures, <https://ww2.arb.ca.gov/resources/documents/railyard-health-risk-assessments-and-mitigation-measures>

<sup>11</sup> Alameda Corridor Transportation Authority, <http://www.acta.org/>

<sup>12</sup> CARB, History, <https://ww2.arb.ca.gov/about/history>



warehouses) through facility-based regulations (e.g., Rule 2305<sup>13</sup>). The sections below describe the regulatory and enforcement efforts from U.S. EPA, CARB, and South Coast AQMD.

## U.S. EPA and CARB

### On-Road Mobile Sources

In 1998, California designated DPM as a TAC. Since this designation, CARB has developed a suite of regulations, rules, and Airborne Toxic Control Measures to reduce Californians' exposure to DPM emitted from mobile sources (e.g., heavy-duty diesel trucks, buses, and off-road equipment). CARB's existing regulations to reduce DPM emissions from trucks and buses include the Drayage Truck Regulation<sup>14, 15</sup> and the Truck and Bus Regulation.<sup>16, 17</sup> Main components of the Drayage Truck Regulation include registration in CARB's Drayage Truck Registry, recordkeeping and reporting requirements, truck emissions standards, and properly functioning emission control technologies. The Truck and Bus Regulation requires the use of exhaust after treatment, like diesel particulate filters; newer engines that meet lower emissions standards; and limits on idling of diesel-fueled vehicles.

In February 2022, CARB adopted an update to its Transport Refrigeration Unit (TRU) Regulation.<sup>18</sup> CARB defines transport refrigeration units as refrigeration systems designed to refrigerate or heat perishable products that are transported in various containers, including truck vans, semi-truck trailers, shipping containers, and railcars that are powered by diesel internal combustion engines. CARB's TRU Regulation will reduce TAC, criteria air pollutant, and greenhouse gas emissions by transitioning to zero-emission technologies. CARB has created informational documents to assist regulated entities (e.g., TRU owners, TRU operators, facilities that support TRU use, etc.) understand compliance requirements and their responsibilities under the TRU regulation.

In March 2021,<sup>19</sup> CARB adopted the Advanced Clean Trucks Rule which requires truck manufacturers to transition from producing diesel trucks and vans to zero-emission vehicles beginning with model year 2024. Manufacturers who sell complete vehicles with combustion

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<sup>13</sup> South Coast AQMD, Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program, <http://www.aqmd.gov/docs/default-source/rule-book/reg-xxiii/r2305.pdf>

<sup>14</sup> CARB, Update on California Actions to Minimize Community Health Impacts from Freight, March 2019, [https://www.arb.ca.gov/board/books/2019/032119/19-3-2pres.pdf?\\_ga=2.79278740.1419761847.1559951314-1545453421.1552083450](https://www.arb.ca.gov/board/books/2019/032119/19-3-2pres.pdf?_ga=2.79278740.1419761847.1559951314-1545453421.1552083450)

<sup>15</sup> CARB, Drayage Trucks at Seaports & Railyards, <https://ww2.arb.ca.gov/our-work/programs/drayage-trucks-seaports-and-railyards>

<sup>16</sup> CARB, Truck and Bus Regulation Compliance Requirement Overview, [https://www.arb.ca.gov/msprog/onrdiesel/documents/fsregsum.pdf?\\_ga=2.6055219.1262131232.1649211318-53673684.1628617068](https://www.arb.ca.gov/msprog/onrdiesel/documents/fsregsum.pdf?_ga=2.6055219.1262131232.1649211318-53673684.1628617068)

<sup>17</sup> CARB, Truck and Bus Regulation, <https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation>

<sup>18</sup> CARB, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate, <https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit>

<sup>19</sup> CARB, Advanced Clean Trucks, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks>

engines or certified Class 2b-8 chassis would be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck and chassis sales would need to be 55 percent of Class 2b-3 truck sales, 75 percent of Class 4-8 straight truck sales, and 40 percent of truck tractor sales. This rule also requires that, on a one-time basis, fleets report information on their vehicles to support future zero-emission fleet rules. **Table A5b-5** below lists key upcoming regulations from U.S. EPA and CARB to reduce emissions from mobile sources. CARB projects that between 2012 and 2030, there will be over a 91 percent reduction in on-road DPM emissions within the Basin from the implementation of CARB's mobile source regulations, with most of the reductions occurring before 2024.<sup>20</sup>

### Off-Road Mobile Sources

#### Examples of Portable Off-Road Equipment (PERP)

PERP makes up the second largest category for off-road mobile sources emissions of VOC, PM2.5, PM10 and DPM (**Table A5b-2**). PERP<sup>21</sup> is a statewide program created by CARB to register portable equipment as an alternative to securing permits from local air districts. PERP registered equipment may operate throughout the state without obtaining permits from any of California's 35 air districts. Portable engines over 50 horsepower and portable equipment that emit particulate matter cannot be operated within the Basin without either a South Coast AQMD permit or PERP registration. In some cases, portable equipment may be ineligible for PERP registration, therefore requiring a South Coast AQMD permit. One of the key aspects in determining PERP eligibility is the length of time (residence time) the engine or equipment is at one location. Engines and equipment are deemed portable when their residence time is less than 12 months.<sup>22</sup> If engines or equipment reside at the same location for over 12 months, they require South Coast AQMD permits.

CARB established an Airborne Toxic Control Measure (ATCM) for portable off-road heavy-duty vehicles,<sup>23</sup> which applies to diesel off-road vehicles rated 25 horsepower or greater. Examples of equipment subject to this ATCM include forklifts, construction equipment, and ground support equipment. This ATCM establishes fleet average emission rates for PM and NOx that decline over time; fleet turnover or repowering must keep pace with the declining emission rates in this ATCM.

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<sup>20</sup> CARB, 2020 Community Recommendations Staff Report, [https://ww2.arb.ca.gov/sites/default/files/2020-11/2020\\_Community\\_Recommendations\\_Staff\\_Report\\_Final.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-11/2020_Community_Recommendations_Staff_Report_Final.pdf)

<sup>21</sup> CARB, Portable Equipment Registration Program (PERP), <https://ww2.arb.ca.gov/our-work/programs/portable-equipment-registration-program-perp>

<sup>22</sup> South Coast AQMD, Portable Equipment Registration Program (PERP), <http://www.aqmd.gov/home/permits/equipment-registration/perp>

<sup>23</sup> CARB, Final Regulation Order – ATCM for DPM from Portable Engines Rated at 50 Horsepower or Greater, [https://ww2.arb.ca.gov/sites/default/files/2020-03/PERP\\_ATCM\\_12.5.18R.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-03/PERP_ATCM_12.5.18R.pdf)

## Locomotives

In SLA, locomotives are another category of off-road mobile sources which contribute to significant emissions of NO<sub>x</sub>, VOC, PM<sub>2.5</sub>, PM<sub>10</sub>, and DPM (**Table A5b-2**). Railroad operations are regulated at the federal level, primarily by the Federal Railroad Administration (FRA) and the Surface Transportation Board (STB). Locomotive emissions are primarily regulated by the U.S. EPA. **Table A5b-3** and **Table A5b-4** below identifies the emissions standards of NO<sub>x</sub>, PM, and hydrocarbons (HC) in grams per brake horsepower-hour (g/bhp-hr) required by the U.S. EPA for line-haul and switcher locomotives.<sup>24</sup> Federal authority on locomotives<sup>25</sup> limits certain federal, state, and local regulatory authorities and actions to reduce emissions.

Additional U.S. EPA regulations include mandating the use of ultra-low sulfur diesel fuel<sup>26</sup> and requiring the installation of idle reduction technology on newly manufactured and remanufactured locomotives.<sup>27</sup> Also, under the Clean Air Act, U.S. EPA requires new locomotive engines to be built to meet the cleanest emission standard (currently Tier 4 engines).<sup>28</sup> These regulations are for new or remanufactured locomotive engines and do not require railroad companies to reduce their use of existing older, higher-emitting locomotives or to meet a fleetwide average. Based on the latest data (2020) reported to CARB by BNSF and UP railroads, about 93 percent of all locomotive activity in the Basin does not meet the cleanest emission standard which is Tier 4.<sup>29</sup>

In 2017, CARB petitioned the U.S. EPA to develop a new regulation requiring locomotive engine manufacturers to meet a cleaner Tier 5 emission standard for new locomotive engines, but the U.S. EPA has not acted on this petition. The new emission standards would provide NO<sub>x</sub> and PM reductions, particularly in the communities that surround railyards. If the U.S. EPA were to develop a Tier 5 emissions standard, it would not result in immediate emissions reductions because locomotive fleet turnover is slow as locomotive engines can last over 30 years.

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<sup>24</sup> Code of Federal Regulations, Part 1033 – Control of Emissions from Locomotives, [https://www.ecfr.gov/cgi-bin/text-idx?SID=159ba6f126272ea1995c71a43b7af309&mc=true&node=pt40.36.1033&rgn=div5#se40.36.1033\\_1101](https://www.ecfr.gov/cgi-bin/text-idx?SID=159ba6f126272ea1995c71a43b7af309&mc=true&node=pt40.36.1033&rgn=div5#se40.36.1033_1101)

<sup>25</sup> Federal Trade Commission, Interstate Commerce Commission Termination Act of 1995, <https://www.ftc.gov/legal-library/browse/statutes/interstate-commerce-commission-termination-act-1995>

<sup>26</sup> U.S. EPA, Diesel Fuel Standards and Rulemakings, <https://www.epa.gov/diesel-fuel-standards/diesel-fuel-standards-and-rulemakings#nonroad-diesel>

<sup>27</sup> U.S. EPA, Control of Emissions from Idling Locomotives, <https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P100HP4Q.pdf>

<sup>28</sup> U.S. EPA, Regulations for Emissions from Locomotives, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-locomotives>

<sup>29</sup> CARB, Rail Emission Reduction Agreements, <https://ww2.arb.ca.gov/resources/documents/rail-emission-reduction-agreements>

**Table A5b-3: Federal Line-Haul Locomotive Emission Standards**

Emission Tier	Year of Original Manufacture	NOX (g/bhp-hr)	PM (g/bhp-hr)	HC (g/bhp-hr)
Tier 0	1973 – 1992	8.0	0.22	1.00
Tier 1	1993 – 2004	7.4	0.22	0.55
Tier 2	2005 – 2011	5.5	0.10	0.30
Tier 3	2012 – 2014	5.5	0.10	0.30
Tier 4	2015 or later	1.3	0.03	0.14

**Table A5b-4: Federal Switcher Locomotive Emission Standards**

Emission Tier	Year of Original Manufacture	NOX (g/bhp-hr)	PM (g/bhp-hr)	HC (g/bhp-hr)
Tier 0	1973 – 1992	11.8	0.26	2.10
Tier 1	1993 – 2004	11.0	0.26	1.20
Tier 2	2005 – 2011	8.1	0.13	0.60
Tier 3	2012 – 2014	5.0	0.10	0.60
Tier 4	2015 or later	1.3	0.03	0.14

The SLA community boundary does not have any railyards, but does have three rail tracks used by BNSF and UP. CARB has two agreements with BNSF and UP to reduce locomotive emissions, including in and around railyards.<sup>30</sup> The agreement in 1998 required BNSF and UP to meet a fleet average of Tier 2 locomotives in the Basin every year between 2010 and 2030; both railroad companies have met this commitment every year. CARB has reported that emissions in recent years have increased due to increased activity.<sup>31</sup> The second agreement focused on railyards, and between 2005 and 2015 required implementing an idling-reduction program, maximizing the use of ultra-low sulfur diesel fuel, preparing health risk assessments, evaluating measures to further reduce DPM, and conducting an assessment of remote sensing technology to identify high-emitting locomotives. Despite these agreements, additional efforts are necessary to meet criteria air pollutant standards across the state. Due to the absence of federal action to address emissions from locomotives, CARB is currently developing a statewide In-Use Locomotive Regulation to reduce criteria air pollutant, TAC, and greenhouse gas emissions for in-use locomotives.<sup>32</sup>

Currently, there are several CARB regulations to address onsite mobile sources at railyards and ports.<sup>33</sup> The Cargo Handling Equipment Regulation requires equipment (e.g., yard trucks, rubber-

<sup>30</sup> CARB, 1998 Locomotive NOx Fleet Average Emissions Agreement in the South Coast Air Basin, <https://ww2.arb.ca.gov/1998-mou-summary-data-archive>, and 2005 Statewide Rail Yard Agreement, <https://ww2.arb.ca.gov/resources/documents/2005-statewide-railyard-agreement>

<sup>31</sup> CARB, Concepts for In-Use Locomotive Regulation Workshop, Slide 21, <https://ww2.arb.ca.gov/sites/default/files/2020-11/2020.10.28%20907AM%20Workshop%20Slides%20Day%201%20-%20Remediated.pdf>

<sup>32</sup> CARB, Concepts to Reduce Rail Emissions from Locomotives and Railyards, <https://ww2.arb.ca.gov/our-work/programs/reducing-rail-emissions-california/concepts-reduce-emissions-locomotives-and>

<sup>33</sup> Although not in the SLA community boundary, the Ports of Los Angeles and Long Beach are concerns for the CSC.

tired gantry cranes, top and side picks, and forklifts) at intermodal railyards and ports to meet engine performance and opacity standards.<sup>34</sup> The Drayage Truck Regulation requires heavy-duty vehicles that transport containers and bulk goods to and from intermodal railyards and ports to meet engine emissions performance standards and be registered with CARB. New regulations are also being considered and phased in, such as CARB's TRU Regulation which requires refrigeration units to meet engine performance standards and be registered with CARB. At railyards and ports, TRUs can be found on truck trailers, railcars, and connected to shipping containers as generator sets. CARB is also working with air districts, railroad companies, and U.S. EPA to resolve locomotive complaints. For more information on key upcoming regulations from U.S. EPA and CARB to reduce emissions from mobile sources, please refer to **Table A5b-5**.

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<sup>34</sup> CARB, Cargo Handling Equipment, <https://ww2.arb.ca.gov/our-work/programs/cargo-handling-equipment>

**Table A5b-5: Upcoming Regulations from U.S. EPA and CARB**

Agency	Proposed Action	Expected Decision	Expected Phase-In Period
U.S. EPA	Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine Standards* <sup>35</sup> – In response to a petition from state and local air agencies led by South Coast AQMD, U.S. EPA has committed to updating its heavy-duty vehicles and engine standards to reduce NOx emissions.	2022	2027-2031
CARB	Advanced Clean Fleets <sup>36</sup> – Would require fleets to transition to zero-emissions, including drayage trucks.	2023	2024-2045
CARB	Advanced Clean Car 2 <sup>37</sup> – Would reduce criteria pollutants and greenhouse gas emissions from new light and medium-duty vehicles beyond the 2025 model year and increase the number of zero-emission vehicles for sale.	2022	2026-2035
CARB	Cargo Handling Equipment Regulation <sup>34</sup> – Would assess the availability and performance of zero-emission technology as an alternative to all combustion-powered cargo equipment and evaluate additional solutions that may include efficiency improvements.	2022	To Be Determined
CARB	In-Use Locomotive Regulation – Would reduce criteria air pollutant, TAC, and greenhouse gas emissions to address regional pollution and long-standing environmental justice concerns with communities near railyards and other locomotive operations.	2022	To Be Determined
CARB	Transport Refrigeration Unit (TRU) Regulation Phase II – Would establish new requirements to transition the transport refrigeration units not covered in the Phase I regulation (adopted in Feb. 2022) to zero-emission operations by requiring both zero-emission technology and supporting infrastructure	2024	To Be Determined

\*The Control of Air Pollution from New Motor Vehicles was previously known as the Cleaner Truck Initiative.

## South Coast AQMD

### Warehouses

The South Coast AQMD Governing Board adopted Rule 2305 in May 2021. The purpose of the rule is to help meet state and federal air quality standards for ozone and PM<sub>2.5</sub> by reducing local and regional emissions of NO<sub>x</sub> and PM, and facilitating local and regional emissions reductions

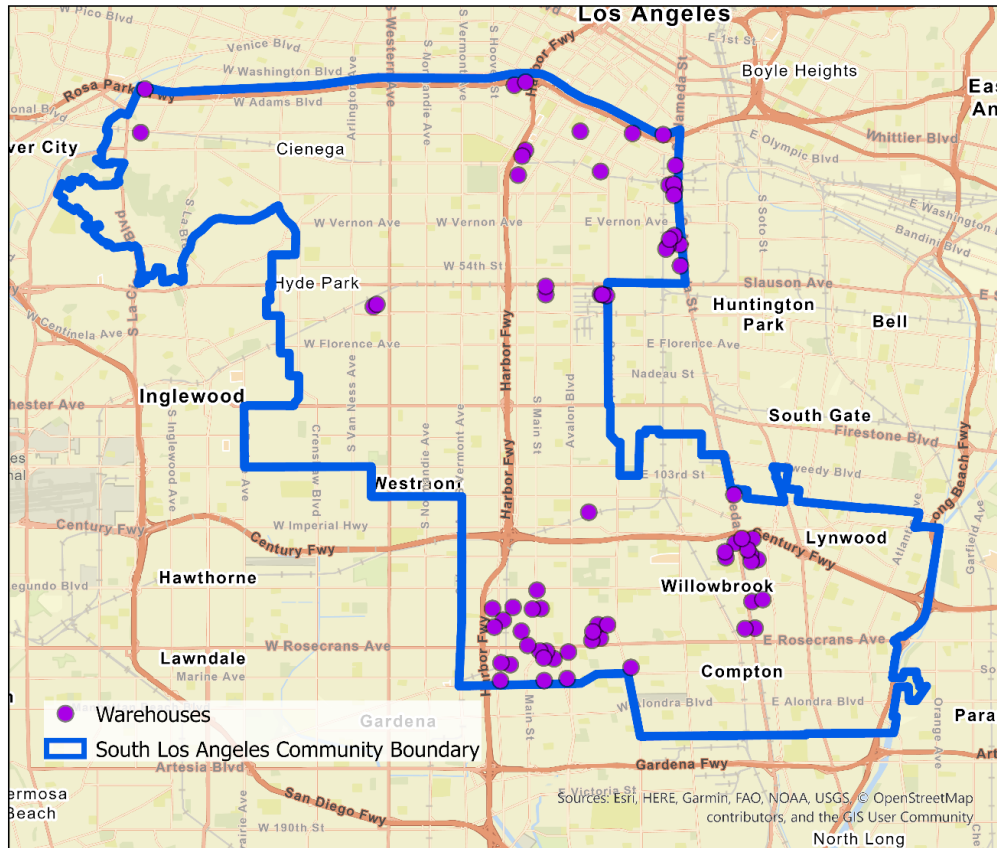
<sup>35</sup> U.S. EPA, Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards - Supporting Testing, Research and Modeling, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/control-air-pollution-new-motor-vehicles-heavy-duty>

<sup>36</sup> CARB, Advanced Clean Fleets, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets>

<sup>37</sup> CARB, Advanced Clean Cars Program, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program>

associated with warehouses and the mobile sources attracted to warehouses. Rule 2305 applies to warehouses greater than or equal to 100,000 square feet of indoor space in a single building conducting warehousing activities. There are approximately 70 warehouses in the SLA community boundary subject to Rule 2305, as shown in **Figure A5b-7**.

**Figure A5b-7: Warehouses in SLA Subject to Rule 2305**



### Locomotives

South Coast AQMD has limited authority over locomotives and activities from railroad companies. If regulations are adopted, they will likely require federal approval before going into effect. With these limitations, South Coast AQMD is developing two indirect source rules (ISR) on railyards. The first rule will address new railyards (new railyards are currently proposed by BNSF in Colton and near West Long Beach).<sup>38</sup> The second rule would address existing railyards. South Coast AQMD staff continues to work with stakeholders (e.g., railyard operators, railroad, communities, etc.) on proposed concepts for the Proposed Rule 2306. It is currently scheduled to be presented to the South Coast AQMD Governing Board for consideration in October 2022.<sup>39</sup>

<sup>38</sup> South Coast AQMD, Proposed Rule 2306 – Indirect Source Rule for New Intermodal Facilities, <https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-2306>

<sup>39</sup> South Coast AQMD, Rule and Control Measure Forecast, May 6, 2022, <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2022/2022-may6-019.pdf?sfvrsn=2>

## Air Monitoring

The SLA CERP does not include monitoring actions for mobile sources. Please refer to the Community Air Monitoring Plan (CAMP) for more information on air monitoring efforts for this community.

## Compliance and Enforcement

Compliance and enforcement information for mobile sources in SLA is available in Chapter 4: Enforcement History and Overview and Appendix 4: Enforcement History and Overview. Since truck idling has been identified as a community priority, this CERP includes enhanced enforcement efforts intended to address SLA community concerns directly, taking community input into account where appropriate.

Both CARB and South Coast AQMD enforce the Commercial Vehicle Idling Regulation that restricts commercial vehicle idling<sup>40</sup> (gross vehicle weight rating of greater than 10,000 pounds). The regulation restricts idling to five minutes or less for commercial vehicles:

- Without a “Certified Clean Idle”<sup>41</sup> sticker, or
- With a “Certified Clean Idle” sticker and idling within 100 feet of a school, residence, hotel, or other restricted area, or
- Operating diesel-fueled auxiliary power systems within 100 feet of restricted areas.

The regulation also provides exceptions for queuing (i.e., vehicles waiting in line to perform work where shutting engines off is not possible). **Figure A5b-8** shows a “Certified Clean Idle” sticker provided for diesel engines that meet CARB’s certification requirements.

The state’s Air Toxic Control Measure to address DPM from heavy-duty diesel vehicles specifically provides enforcement authority to air districts to enforce truck idling regulations. Activities for truck idling inspections fall into two categories:

- Those initiated by South Coast AQMD, which are prearranged field operations (also referred to as “sweeps” or inspections) to identify violating trucks.
- Those prompted by outside parties, such as public complainants and other governmental agency referrals.

Truck idling inspections are unannounced in order to avoid advance warning and ensure that the inspector can identify any trucks that may be in violation of the truck idling regulations. The locations at which inspectors conduct field operations are chosen based on community input, historical complaint data, locations of sensitive receptors, and other data sources that give insight as to where trucks may be idling in the community. If a truck is found to be in violation of California’s idling regulation, inspectors will take necessary enforcement action to address the

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<sup>40</sup> CARB, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, <https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling>

<sup>41</sup> CARB “Certified Clean Idle” are vehicles that use an engine that has been certified to an optional NOx idling emission standard of 30 grams per hour, <https://ww2.arb.ca.gov/sites/default/files/classic/enf/adv/adv376.pdf>



non-compliant activity. This enforcement action generally takes the form of a Notice of Violation (NOV) to the owner of the vehicle. NOVs generally result in a fine and/or another penalty.

While there are many reasons to conduct an inspection, air pollution concerns received directly from community members through public complaints are a very important source of information. All complaints received are assigned to an inspector for investigation. The complaint telephone line is handled by a live attendant during business hours (Monday to Friday) or by a standby system during off hours. Complainant information is kept confidential and while anonymous complaints are accepted, providing contact information is crucial for the inspector to be able to gather any relevant information to conduct an effective investigation. **To report complaints, community members can call 1-800-CUT-SMOG (1-800-288-7664) or file an online complaint at <https://www.aqmd.gov/home/air-quality/complaints>.**

**Figure A5b-8: CARB Certified Clean Idle Sticker**



### Incentives

Since 2017, the California Legislature has budgeted approximately \$704 million to support the AB 617 program through annual incentives aimed to advance lower-emitting technologies, provide new opportunities for stationary source incentives, and support community-identified projects to implement CERPs statewide. CARB distributes these incentives through Community Air Protection Incentives;<sup>42</sup> South Coast AQMD refers to this as the Community Air Protection Program (CAPP) incentives.

CARB works with the California Air Pollution Control Officers Association (CAPCOA) to distribute incentive funds annually to the air districts throughout California for AB 617 designated communities and communities that are under consideration for selection in the AB 617 program. The amount of funding that the State Legislature allocates to AB 617 is determined each year. There is no guarantee to the amount that the state will allocate to AB 617 each year and the amount of funding each air district will receive (which is distributed by CARB). Air districts

<sup>42</sup> CARB, Community Air Protection Incentives, <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-incentives>

determine the final incentives distribution amongst their AB 617 designated communities. CARB's Community Air Protection Incentives 2019 Guidelines<sup>43</sup> also known as CAPP Guidelines at South Coast AQMD) identifies projects eligible for incentive funds and requirements for allocating the incentive funds. It is important to note, CAPP incentive funds can only be used for projects or technologies supported by an adopted CERP.

CAPP incentives help owners replace older higher-polluting vehicles and equipment with cleaner or zero-emission models. The incentives may also be used for changes at local industrial facilities to reduce emissions of toxic or smog-forming pollutants, to build or install zero-emission infrastructure (e.g., charging stations), or to support local measures that air districts and communities identify through an AB 617 CERP.

In South Coast AQMD AB 617 Year 1 and Year 2 communities, CAPP incentives funded approximately 740 mobile source projects (resulting in approximately \$130.4 million in grants).<sup>44</sup> Examples of projects include the replacement of heavy-duty trucks, off-road equipment, and locomotives, and installation of zero-emission infrastructure (e.g., outlets for electric-powered truck refrigeration units). To date, approximately \$247,000 in CAPP incentive funds have been allocated to SLA. For more information on CAPP incentives, including applications submitted and final projects selected, please refer to: [www.aqmd.gov/cappincentives](http://www.aqmd.gov/cappincentives).

South Coast AQMD funds projects to develop and implement zero-emission technologies for heavy-duty trucks, such as battery-electric and fuel cell. Additionally, South Coast AQMD offers incentives to truck owners to replace older higher-polluting trucks with cleaner trucks. Specifically, truck owners must use these incentives to purchase trucks that are cleaner than what regulations currently require. South Coast AQMD's Voucher Incentive Program (VIP)<sup>45</sup> provides incentives for the purchase of newer lower-emission vehicles for small businesses with fleets of 10 or fewer vehicles that primarily operate within California. The Carl Moyer Program<sup>46</sup> (Moyer) and Volkswagen mitigation programs incentivize emission reductions through the replacement of heavy-duty vehicles and other equipment operating in California. Moyer may also be used to support or develop infrastructure for zero- and near-zero emission technologies that are cleaner-than-required and cost-effective.

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<sup>43</sup> CARB, Community Air Protection Incentives Guidelines, <https://ww2.arb.ca.gov/resources/documents/community-air-protection-incentives-guidelines>

<sup>44</sup> Year 1 (2018-designated) AB 617 communities refer to East Los Angeles, Boyle Heights, West Commerce; San Bernardino, Muscoy; and Wilmington, Carson, West Long Beach. Year 2 (2019-designated) AB 617 communities refer to Eastern Coachella Valley and Southeast Los Angeles.

<sup>45</sup> South Coast AQMD, Voucher Incentive Program, <http://www.aqmd.gov/home/programs/business/business-detail?title=voucher-incentive-program&parent=vehicle-engine-upgrades>

<sup>46</sup> South Coast AQMD, Carl Moyer Program (Heavy-Duty Engines), <http://www.aqmd.gov/home/programs/business/business-detail?title=heavy-duty-engines&parent=vehicle-engine-upgrades>

In addition to South Coast AQMD's programs, CARB's Clean Off-Road Equipment Voucher Incentive Project (CORE)<sup>47</sup> accelerates the deployment of cleaner off-road technologies. CORE provides a streamlined way for fleets ready to purchase specific zero-emission equipment to receive funding to offset the higher cost of such technologies. Zero-emission off-road freight equipment that is currently in the early stages of commercial deployment are specifically targeted by this project. CORE will provide vouchers to California purchasers and lessees of zero-emission off-road freight equipment on a first-come, first-served basis, increasing incentives for equipment that is located in disadvantaged communities.

Despite not being within the SLA community boundary, the Ports of Los Angeles and Long Beach (Ports) are concerns for the CSC because of increased truck traffic from the goods movement. There are currently ongoing efforts to help address truck emissions within the Ports. Currently, the Ports are developing their Clean Truck Program as part of their Clean Air Action Plan to reduce port emissions.<sup>48</sup> The purpose of the Clean Truck Program is to generate a source of incentive funds for zero-emission drayage trucks and to fund the supporting zero-emission infrastructure. The funds would be generated by charging a fee per loaded container to trucks entering the ports, with an exemption for cleaner trucks. In March 2020, the Ports' harbor commissioners voted to support a cargo container rate of \$10 per Twenty-Foot Equivalent Unit (TEU), or \$20 per Forty-Foot Equivalent Unit (FEU). This rate is anticipated to provide approximately \$90 million per year for drayage truck incentives. In late 2021, the CTF Rate was adopted into the Ports' tariffs and fee collection is anticipated to begin in April 2022.

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<sup>47</sup> California Air Resources Board, Clean Off-Road Equipment Voucher Incentive Project.

<https://ww2.arb.ca.gov/our-work/programs/clean-off-road-equipment-voucher-incentive-project/about>

<sup>48</sup> The Port of Los Angeles, Clean Truck Program, <https://www.portoflosangeles.org/environment/air-quality/clean-truck-program>