HEAVY DUTY TRUCKS: **SUBCOMMITTEE MEASURES**

HEAVY DUTY MOBILE SOURCES IN STOCKTON

There are a variety of heavy-duty mobile sources operating in and around the City of Stockton. These can range from on-road trucks, school and transit buses, off-road equipment, including agricultural and construction equipment, line-haul, short-haul and switcher locomotives. This equipment is primarily powered by diesel engines and, depending on the specific category, is regulated by one or more statewide regulations.

Emissions from this source category include oxides of nitrogen (NOx) and combustion PM from the internal combustion engines. Mobile sources account for more than 85% of the NOx inventory throughout the Valley (Appendix C – Source Apportionment and Community). In the Stockton community, 328.08 tons per year of NOx, 26.44 tons per year of VOC and 9.34 tons per year of PM2.5 are attributed to on-road heavy-duty equipment. In addition, 133.08 tons per year of NOx, 20.49 tons per year of VOC and 6.21 tons per year of PM2.5 are attributed to off-road heavy-duty equipment referenced in these measures.

Figure 4-7 Examples of Heavy Duty Mobile Sources

COMMUNITY CONCERNS AND COMMENTS

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

CURRENT CONTROL PROGRAMS

The District does not have regulatory authority of emissions from mobile sources, including heavy duty vehicles and equipment, locomotives, school and transit buses. Diesel powered on-road heavy duty vehicles are subject to the statewide CARB Truck and Bus Regulation which requires all equipment to get progressively cleaner over time. Off-road heavy-duty equipment is similarly controlled through the CARB Off-Road Regulation, which requires all fleets to be upgraded to newer, cleaner technologies over time. However, at this time, there are no regulatory requirements in place at the state or

federal level controlling emissions from locomotives (for more information, see Section 5.6.2 - CARB Enforcement Strategies).

Due to the large amount of pollution that can be attributed to mobile sources, the District has implemented a broad suite of voluntary incentive programs, targeted at reducing emissions from heavy-duty engines operating throughout the Valley.

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

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

- Program for Heavy-Duty Alternative Fuel Infrastructure which provides local businesses and agencies incentive funding to install alternative fueling infrastructure (electric, natural gas, hydrogen, etc.) to support the increased deployment of heavy-duty advanced clean technology vehicles.

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

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

Locomotives:
Freight locomotives are regulated by the U.S. EPA. The current regulation requires that all locomotives purchased in or after 2015 be at least a Tier 4 emission level. Older, lower Tier engines, which comprise the majority of Class 1 fleets, are still permitted to run. Additionally, CARB is planning actions to address freight locomotive emissions within the State. More details can be found in the 2019 March CARB Board Meeting Informational Update: https://www.arb.ca.gov/board/books/2019/032119/19-3-2pres.pdf

The District offers two incentive programs for locomotive fleets interested in transitioning to newer, clean technology, including:

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

- Proposition 1B - http://valleyair.org/grants/locomotives-prop1b.htm. This program incentivizes the reduction of emissions and health risks associated with freight movement along California's trade corridors via upgrading to cleaner technologies or installation of emissions capture and control systems.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

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

The following are additional suggested measures not within the Air District's jurisdiction to directly implement:

HD.1: HEAVY DUTY TRUCK REROUTING

Overview: Community Steering Committee members have suggested that a study should be performed to assess the existing heavy-duty diesel truck routes in and around the Port of Stockton and the nearby neighborhoods, including the Boggs Tract neighborhood. The study will focus on whether there are other routes which will result in reduced exposure to toxic air contaminants by residents in the nearby neighborhoods. The District will work with the City, County, and all other appropriate land-use and transportation agencies regarding this and the desire of the CSC for inclusion in the Stockton CERP. The District will work with the City of Stockton and other appropriate agencies to seek funding to support this study.

Jurisdictional Issues: It should be noted that the District has no authority over how agencies allow land under their jurisdiction to be used. These so-called "land-use" decisions, such as truck rerouting, are historically the responsibility, under state law, of cities and counties, or, in some cases, state and federal agencies responsible for transportation corridors, state and federal parks, and other properties. AB 617 does not provide the District with new land-use regulatory authority, so land-use authority remains with cities, counties, and state and federal land-use agencies, as discussed in CARB's Blueprint (see "Who Has the Authority to Implement Actions?", page 26 of the Blueprint). However, the District is committed to working with the implementing agencies to identify additional possible funding sources for the study up to $500,000, developing the scope of work for the study, and coordinating conversations with the implementing agencies and the CSC as necessary.

Implementing Agency: City, County, San Joaquin COG, Caltrans, Port of Stockton

Strategy Type: Partnership

Budgeted Amount: $500,000

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

HD.3: SUPPORT PLANNING AND DEVELOPMENT OF HEAVY-DUTY ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

Overview: The goal of this strategy is to provide support for planning and development of fueling infrastructure for heavy-duty zero emission vehicles and transportation refrigeration units to support broader deployment of clean vehicles operating throughout the community and reduce the impact of emissions from the idling of heavy duty diesel trucks at distribution centers, warehouses, or other freight facilities where trucks are being loaded or unloaded. Utilizing Board-approved methodology and funding levels the District will work closely with businesses, public agencies, and fueling providers to support and incentivize the development of clean-vehicle fueling infrastructure in the area of the community. This action will prioritize incentive funding to support the development and construction of new electric infrastructure within the community. This includes increased outreach to businesses and public agencies operating vehicles within the community as well as prioritized funding for projects that serve vehicles operating in the community.

Depending on the size, throughput and configuration of the fueling infrastructure, the proposed funding amount of $1,000,000 would incentivize the development of a new electric charging station.

Implementing Agency: SJVAPCD

Strategy Type: Incentives and Outreach

Budgeted Amount: $1,000,000

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

HD.4: TRUCK IDLING PLUG-INS

Overview: The goal of this strategy is to reduce emissions from heavy duty diesel truck idling and reduce the use of diesel-fueled internal combustion auxiliary power systems at truck stops where diesel trucks congregate in the Stockton community. Truck stop electrification allows a vehicle operator to "plug in" their vehicle and draw electricity directly from the power grid to provide cab heating and cab cooling, to power cab appliances, and to charge the vehicle's battery.

This strategy would provide funding to launch a program in the Stockton community. The District would leverage experience from the Proposition 1B Goods Movement Emission Reduction Program in order to design a program that would fund the purchase and installation of electrical infrastructure and/or equipment to enable heating, cooling, and other use of cab power for parked trucks at truck stops in the Stockton area. This measure would provide $10,000 in funding per unit, for 33 units. The emission reductions associated with this measure will come from HD.1, as this measure serves to support the deployment of zero and near-zero technology.

Implementing Agency: SJVAPCD

Strategy Type: Incentives

Budgeted Amount: $100,000

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