

SOLID WASTE COLLECTION VEHICLE REGULATION PROPOSED AMENDMENTS

January 24, 2019



Overview

- Background
- Objectives
- Proposed Amendments
 - Solid Waste Collection Vehicles (SWCV)
 - Single Engine Heavy Cranes
- Recommendations



Background

- SWCV regulation
 - Applies to vehicles with 1960 to 2006 model year engines
 - Retrofit PM filters installed by December 31, 2010
 - Low-use exemption
 - No reporting required
- Heavy Cranes
 - Currently subject to the Truck and Bus regulation
 - Heavy crane compliance option rescinded in 2018
 - Compliance challenges

Reasons for Proposed Amendments

- New law limits registration of diesel trucks if not complying with Truck and Bus regulation starting 2020
 - Need to be able to identify compliant SWCV's to avoid unnecessary registration delays
- Lawsuit rescinded flexibilities in 2014 amendments to Truck and Bus regulation
 - Reinstate feasible compliance option for specialized cranes
 - Need for timely amendment to avoid enforcement challenges

Proposed Amendments: Solid Waste Collection Vehicles

- Clarify SWCV definition by truck body type
- Add new reporting requirement
 - For pre-2010 engines
 - Annual mileage for low-use exemption
- Other minor changes to improve consistency with existing regulations

Heavy Cranes

- CARB staff have worked closely with the heavy crane industry since 2012 to address issues specific to these vehicles
- Heavy cranes are specialized equipment that differ greatly from most trucks
- Heavy crane defined as greater than 54,000 pounds GVWR
 - Operated by a licensed crane operator
 - Has a single on-road engine that is certified as power-operated equipment that can hoist, lower, and horizontally move a suspended load
 - Not designed to carry cargo

Heavy Cranes (continued)

- Currently subject to the Truck and Bus regulation
 - Extension for infeasible PM filter retrofit expired January 1, 2018
 - Phase-in of 2010 engines from 2018-2027 has been rescinded
- Need sufficient time to replace equipment
- Some heavy cranes have already been upgraded
- High replacement cost and limited ability to safely retrofit or replace engine
- Almost 700 heavy cranes in about 200 fleets

Heavy Cranes are Highly Specialized Equipment

- Built on specialized chassis and only available from a handful of manufacturers worldwide
- Longer lead times to purchase and take possession of crane
- Have strict Occupational Safety and Health Administration requirements that limit the ability to retrofit or repower
 - Not feasible to recertify most heavy cranes
 - PM filter extensions expired January 1, 2018
- Significantly higher costs than most trucks to purchase new
- More challenges in ability to purchase used cranes
- Limited ability to rent

Not Practical for Heavy Cranes to Meet Same Fleet Turnover Requirements as Other Trucks

- 683 heavy cranes in California
 - 25% upgraded to 2010 or newer engines
 - 30% with OEM and retrofit PM filters are still compliant, but now must be replaced from this year through 2022
 - 37% could not be retrofitted with a PM filter and are not compliant now
- Could disrupt California economy and not viable to immediately park this many heavy cranes
 - Direct impact on small business crane fleets
 - Would create ripple effects from delayed projects that need crane services
- Would not achieve the expected emissions reductions

Proposed Amendments: Heavy Cranes

- Phase-in 2010 or newer model year engines from 2019 to 2027
 - By 2018, at least 10 percent of the cranes in most fleets had 2010 or newer model year engines
 - Continue phase-in at 10 percent per year starting 2019
- Credit for heavy cranes equipped with retrofit or original equipment PM filter before January 1, 2018
 - Treated same as a 2010 or newer model year engine
 - Credit transferable upon sale
- Reporting required until all 2010 engines in the fleet

Heavy Crane 2010 Engine Phase-In Schedule

Compliance Deadline as of January 1	Owner of 1 Crane	Owner of 2 Cranes	Owner of 3 Cranes	Owner of ≥ 4 Cranes
2019			1	20%
2020		1		30%
2021				40%
2022	1		1	50%
2023				60%
2024				70%
2025		1		80%
2026			1	90%
2027				100%



Heavy Crane Optional Model Year Schedule

- Upgrade to 2010 engines by engine model year schedule
- Meets SB 1 “Useful Life” criteria

Engine Year	Upgrade to 2010 Engine January 1
1998-2003	2019
2004-2006	2022
2007-2009	2025

Heavy Crane Exemptions

- Manufacturer Delay
 - Additional time if crane ordered at least 4 months prior to compliance deadline
- Low-Use
 - Operated less than 1,000 miles per year
 - No hour restrictions

Heavy Cranes: Reporting and Recordkeeping Requirements

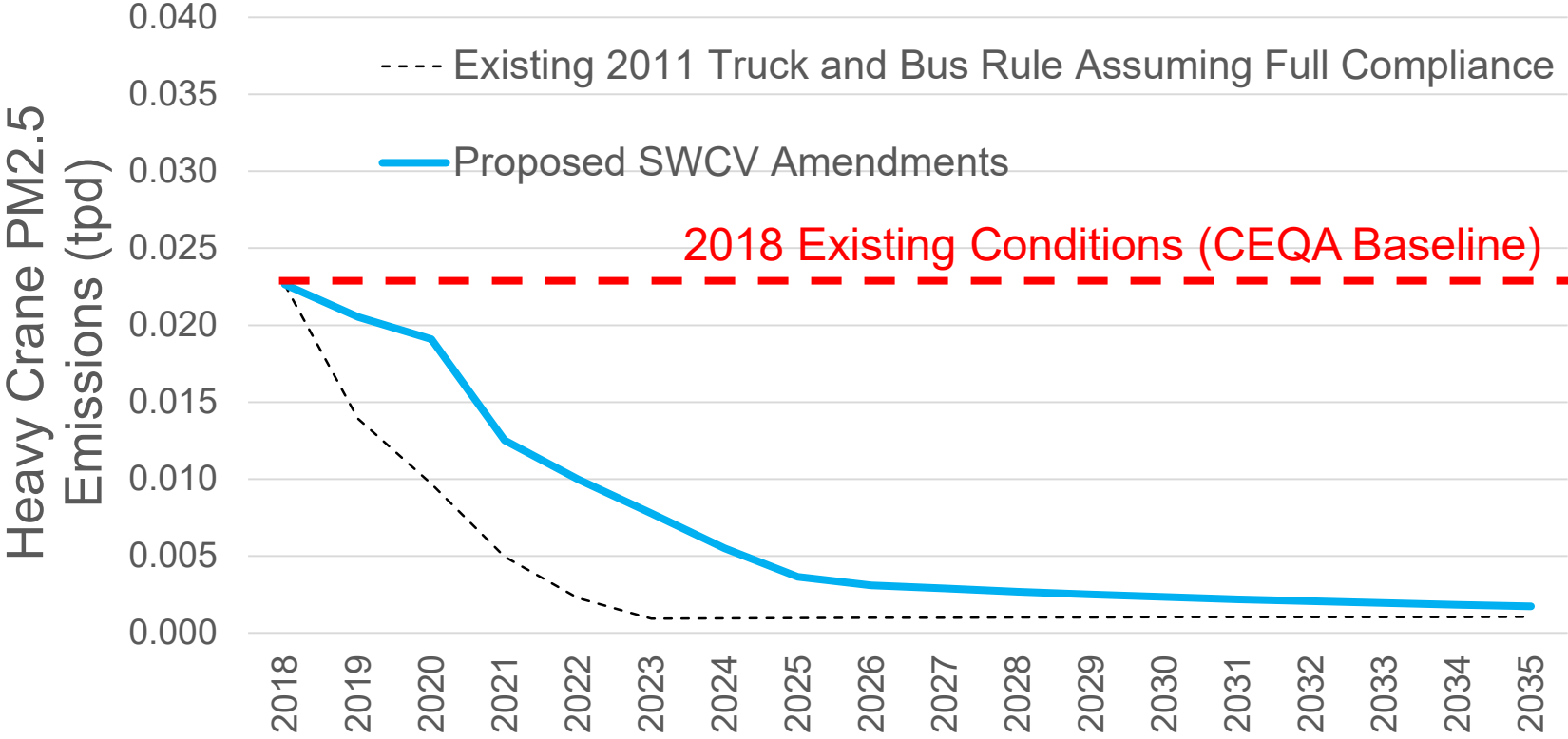
- Reporting required for all heavy crane fleets
 - Vehicle and engine information
 - Annual mileage for low-use vehicles annually
 - Report in Truck Regulations Upload, Compliance and Reporting System (TRUCRS)
- Recordkeeping required to demonstrate compliance
 - Includes mileage documentation and proof of ownership



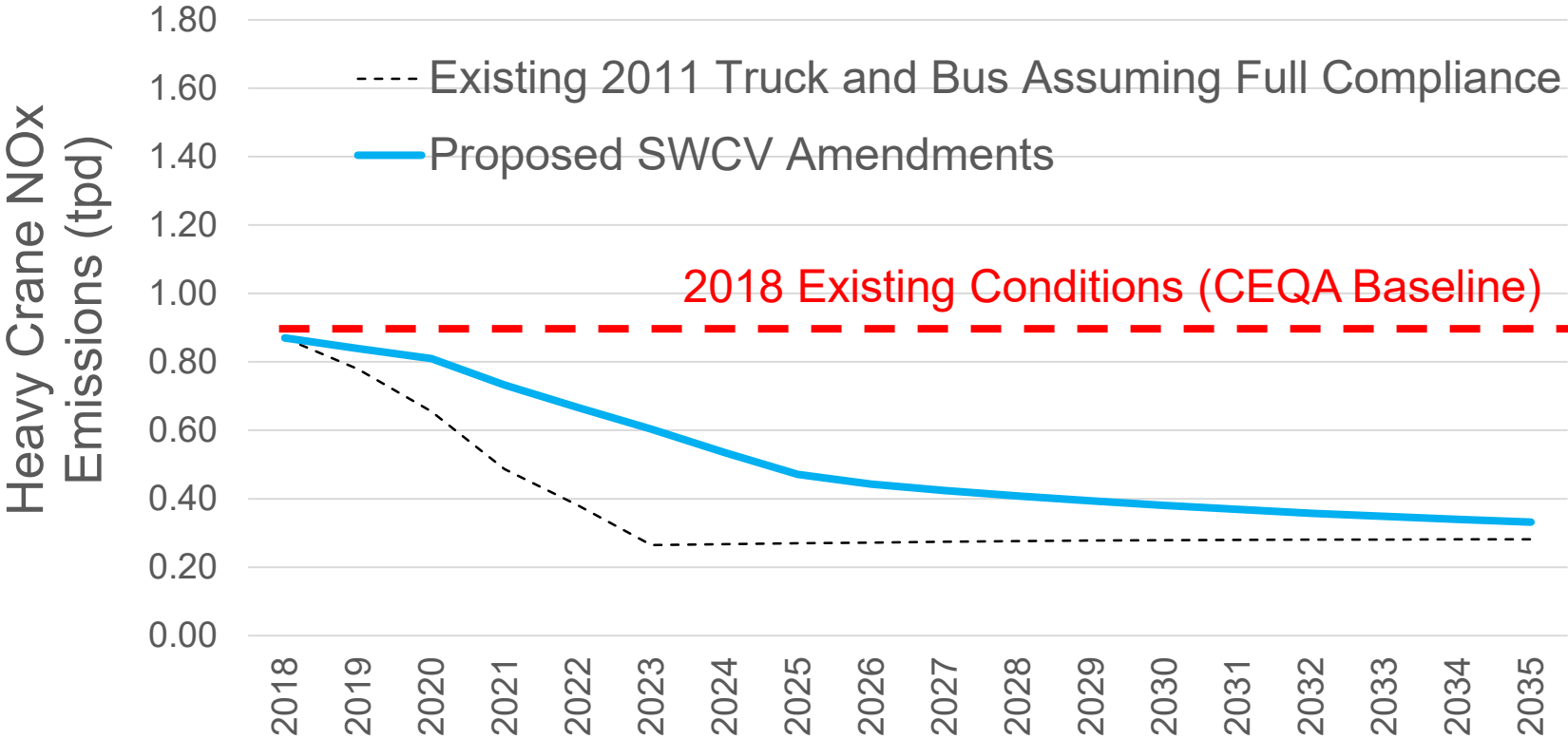
Economic Impacts

- Reduced compliance costs for heavy crane fleet owners compared to meeting existing Truck and Bus regulation
 - Spreads out compliance costs over several years
- Slight increase in administrative costs for owners of SWCVs due to new reporting requirements
 - Heavy cranes currently have reporting requirements
- Total savings ~ \$59 million from 2019 to 2032
 - Compared to full compliance with existing requirements

Projected PM2.5 Emissions (Statewide)



Projected NOx Emissions (Statewide)



Emissions and Air Quality

- Environmental Analysis
 - Continues trend of reducing diesel PM and NOx
 - No increase in emissions when compared to existing environmental conditions in 2018
- Air Quality Analysis
 - Shows projected emissions levels under the various scenarios from 2019 to 2032
 - Compared to 2011 Truck and Bus regulation, hypothetically assuming full compliance
 - Prior updates and inventory projections based on 2014 amendments being in effect
 - Immediate full compliance is not a feasible compliance path for heavy cranes
 - Proposed amendments achieves maximum feasible emissions reductions
 - Heavy cranes are less than 1% of trucks and emissions
 - Will not significantly impact ability to meet long-term SIP commitments

SIP Considerations

- Proposed amendments result in maximum feasible emission reductions in nonattainment areas
- Achieves 0.2% and 0.4% fewer statewide PM_{2.5} and NO_x emissions reduction, respectively, than expected from the 2011 Truck and Bus regulation in 2023
- Will not compromise ability to meet SIP goals in 2023 and 2031

Staff Recommendations

- Approve the proposed resolution which includes adoption of the Environmental Analysis and the proposed amendments
- Timely effective date needed
 - Avoid DMV registration delays for SWCVs
 - Heavy cranes need viable compliance options to minimize enforcement action