

May 2018

Taking a Breath: Lessons For the Port of Oakland From the Clean Trucks Program At the Ports of Los Angeles and Long Beach

Julia Chernova

Golden Gate University School of Law

Follow this and additional works at: <https://digitalcommons.law.ggu.edu/gguelj>

 Part of the [Environmental Law Commons](#)

Recommended Citation

Julia Chernova, *Taking a Breath: Lessons For the Port of Oakland From the Clean Trucks Program At the Ports of Los Angeles and Long Beach*, 10 Golden Gate U. Env'tl. L.J. 87 (2018).

<https://digitalcommons.law.ggu.edu/gguelj/vol10/iss1/5>

This Article is brought to you for free and open access by the Academic Journals at GGU Law Digital Commons. It has been accepted for inclusion in Golden Gate University Environmental Law Journal by an authorized editor of GGU Law Digital Commons. For more information, please contact jfischer@ggu.edu.

TAKING A BREATH: LESSONS FOR THE PORT OF OAKLAND FROM THE CLEAN TRUCKS PROGRAM AT THE PORTS OF LOS ANGELES AND LONG BEACH

JULIA CHERNOVA¹

I. INTRODUCTION

“The American dream has become a nightmare for me,” said Porfirio Diaz, an independent contractor from Mexico who pays for his insurance and fuel yet he does not get paid for the hours spent waiting in line to pick up cargo from the port.² “My son Pablo seems to have asthma, but I can’t take him to the doctor to find out.”³ “I’ve got six kids, and I’m just hoping to be able to live through this,” said LaDonna Williams, a resident of Vallejo—a city in California’s San Francisco Bay Area. “I’m afraid to go to the doctor because I may get a death sentence.”⁴ Meanwhile, the U.S. Environmental Protection Agency (EPA) recognizes that “[d]iesel particulate kills anyone with compromised lung function: it’s no different than having a gun in the hand.”⁵

¹ J.D. Candidate, Golden Gate University, School of Law, 2018. The author’s interest in emissions from the heavy-duty diesel trucks started when she lived in Southern California and observed the effects of air pollution on community health. The author would like to thank her family and friends for constant support, as well as the Golden Gate University School of Law Environmental Law Journal Editorial Board for their leadership and excellent editing.

² It would cost him more than \$80,000 to retrofit his truck, but he cannot even afford to cover the tax on the work. Debra Kahn, *Environmental Justice: EPA hits the road to hear residents’ concerns*, GREENWIRE (Oct. 25, 2010), <https://advance.lexis.com/api/permalink/b5a49e22-4b28-406f-8d5c-4eea4b25c4f7/?context=1000516> (last visited Mar. 14, 2018).

³ *Id.*

⁴ *Id.*

⁵ *Id.*

Currently, the poor pollution standards that are being implemented in the Port of Oakland⁶ have detrimental health effects on the local communities. In many cases, West Oakland's workers and residents are being exposed to much higher levels of pollution and health risks compared to other parts of Oakland and surrounding cities.⁷ Diesel particulate matter (DPM) is the term used for the solid or liquid particles the exhaust carries into the air.⁸ DPM also contains diesel soot and aerosols, including: ash particulates, metallic abrasion particles, silicates and sulfates.⁹ Since DPM is so small and heavy it does not rise into the air; instead, it tends to fall back down close to where it was emitted. As a result, the majority of DPM is easily inhaled into the lungs where it is quickly transported into the bloodstream.¹⁰ Inhaling this particulate matter may relate not only to cancer, but also aggravate asthma, a variety of lung diseases, heart disease, as well as brain and immune system issues.¹¹

Thus, congestion at the Port of Oakland hurts air quality predominantly in African American neighborhoods in West Oakland.¹² For West Oakland residents, living with high levels of air pollution from the Port of Oakland is more than a health issue. For this largely African-American low-income community, it presents an environmental justice issue. The potential adverse impacts of port growth need to be assessed and mitigated, especially since many preexisting health conditions make port communities vulnerable to the cumulative impacts of port growth.¹³

This article first discusses and explains the laws that govern air quality at the major California ports. Then, it explores the Clean Truck Program (CTP) implemented by the ports of Los Angeles and Long Beach to improve port-related air quality and address public health issues

⁶ The Port of Oakland occupies 19 miles of waterfront on the eastern shore of San Francisco Bay, with about 900 acres devoted to maritime activities and another 2,600 acres dedicated to aviation activities. The Port of Oakland owns, manages and markets seaport facilities on the San Francisco Bay and the Oakland Estuary. *California Ports*, <http://www.seecalifornia.com/california/california-ports.html> (last visited Mar. 14, 2018).

⁷ *Pollution and Health Concern in West Oakland*, ENVTL. DEF. FUND, <https://www.edf.org/airqualitymaps/pollution-and-health-concerns-west-oakland> (last visited Mar. 19, 2018).

⁸ Karen Bowen, *Breathing Dangerous Diesel Fumes*, TRUCK NEWS.COM (Feb. 23, 2016), <https://www.trucknews.com/features/breathing-dangerous-diesel-fumes/> (last visited Mar. 14, 2018).

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

¹² *East and West Oakland Health Data: Existing Cumulative Health Impacts*, ALAMEDA CITY. PUB. HEALTH DEP'T 3 (2015), <http://www.acphd.org/media/401560/cumulative-health-impacts-east-west-oakland.pdf> (stating that West Oakland is 49.4% African American).

¹³ Edmund Seto, et al., *Health Impact Assessment of the Port of Oakland*, UNIV. OF CAL. BERKELEY HEALTH IMPACT GROUP ES-1 (2010), <http://www.pewtrusts.org/en/~media/assets/external-sites/health-impact-project/portofoakland.pdf>.

in low-income areas caused by drayage trucks emissions.¹⁴ Next, it discusses a comparison of truck air pollution regulations at the ports of Los Angeles, Long Beach, and Oakland. Finally, this article argues that it is necessary for the port of Oakland to adopt measures used by the ports of Los Angeles and Long Beach to improve air quality in the neighborhood.

II. BACKGROUND

The United States began regulating pollution in the 1960s with the passage of the Clean Air Act (CAA).¹⁵ Since then, the CAA has undergone many modifications as people have sought to reduce exposure to environmental hazards that are known to compromise human health. The CAA requires the EPA “to establish national ambient air quality standards” for certain common and widespread pollutants “based on the latest science” to protect public health and welfare nationwide.¹⁶ The EPA has set air quality standards for six common “criteria pollutants”: (1) particulate matter (PM) also known as particle pollution; (2) ozone; (3) sulfur dioxide; (4) nitrogen dioxide; (5) carbon monoxide; and (6) lead.¹⁷ Section 166 of the CAA declares that states or localities can set standards that are no less stringent than federally mandated minimums.¹⁸ However, the CAA expressly provides an exception to the state of California if the EPA administrator grants California a waiver from preemption by federal standards.¹⁹ Because of certain localized air pollution problems caused by its unique geography and topography, California is the only state per-

¹⁴ Known for the comprehensive clean air programs, the Ports of Los Angeles and Long Beach have eliminated 87% of diesel particulate matter, cut nitrogen oxides by 56%, reduced sulfur oxides by 97% and decreased greenhouse gases more than 18% since 2005. As a result, the Port of Oakland should adopt the strategies developed and put into effect by the ports of Los Angeles and Long Beach because low-income residents of West Oakland experience the effect of diesel exhaust, resulting in high levels diseases caused by air pollution. PORT OF L.A., *Ports to Consider Approving the San Pedro Bay Ports Clean Air Action Plan 2017* (Oct. 16, 2107), <https://www.portoflosangeles.org/environment/progress/news/ports-consider-update-clean-air-action-plan-thursday-nov-2/> (last visited Mar. 14, 2018).

¹⁵ John Bachmann, *Will the Circle Be Unbroken: A History of the U.S. National Ambient Air Quality Standards*, 57 J. OF THE AIR & WASTE MGMT. ASSOC. 652, 662 (2007), <https://www.epaalumni.org/userdata/pdf/History%20of%20NAAQS.pdf>.

¹⁶ *The Clean Air Act in a Nutshell: How It Works*, U.S. ENVTL. PROT. AGENCY 3 (2013), https://www.epa.gov/sites/production/files/2015-05/documents/caa_nutshell.pdf.

¹⁷ *Criteria Air Pollutants*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/criteria-air-pollutants> (last visited Apr. 28, 2017).

¹⁸ *Engine Mfrs. Ass’n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 266 (2004) (Souter, J., dissenting); cf. *Exxon Corp. v. Hunt*, 475 U.S. 355, 363 (1986) (describing section 114(c) of the Comprehensive Environmental Response, Compensation, and Liability Act as “not a model of legislative draftsmanship” whose wording is “at best inartful and at worst redundant.”).

¹⁹ EPA Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66, 496 (Dec. 15, 2009) (codified at 40 C.F.R. ch. I), <https://www.gpo.gov/fdsys/pkg/FR-2009-12-15/pdf/E9-29537.pdf> (announcing the finding of EPA

90 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

mitted by the CAA to initially deviate from the federal standards, but only if California proves to EPA that it has “compelling and extraordinary conditions” requiring emissions restrictions that differ from the federal ones.²⁰ Thus, state and local governments have taken an increasingly active role in enacting programs aimed at addressing environmental concerns such as climate change and clean air.²¹

A. AIR QUALITY STANDARDS UNDER STATE LAW

While the EPA has set emissions standards for new engines, in recent years the California Air Resources Board (CARB) has sought to accelerate emissions reductions with aggressive new regulations.²² CARB is the State agency in charge of developing statewide programs and strategies to reduce the emission of smog-forming pollutants and toxics by diesel-fueled mobile sources.²³ It also actively promotes and disperses grant and incentive programs to assist trucking and freight operators to comply with clean air regulations.²⁴ In response to the growing number of heavy-duty diesel trucks in California, CARB uses two control technologies: a diesel particle filter, which removes most particulate matter, and selective catalytic reduction, which targets emissions of nitrogen oxides (NOx).²⁵

States can also regulate fuel and fuel additives in its state implementation plan if the EPA finds that the state requirement is necessary to achieve the relevant national ambient air quality standard and other requirements are met that limit the number of different states fuel requirements.²⁶ CARB sets state standards and oversees local Air Quality

Administrator Jackson that greenhouse gas emissions constituted an “endangerment” as a preliminary step to formal regulation of such emissions).

²⁰ Ted Hadzi-Anthich & Ryan Walters, *Ninth Circuit Court to California: You Can’t Always Get What You Want*, FORBES (Jun 22, 2017), <https://www.forbes.com/sites/realspin/2017/06/22/ninth-circuit-court-to-california-you-cant-always-get-what-you-want/#1982dcd86d4e> (last visited Mar. 14, 2018).

²¹ Charles H. Haake, & Justin A. Torres, *Drawing the Line: Preemption of State Enviro Regulation*, LAW360 1 (July 15, 2013), <http://www.gibsondunn.com/publications/Documents/HaakeTorres-DrawingtheLine.pdf>.

²² *Truck and Bus Regulation, On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation*, CAL. AIR RES. BD., <https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm> (last visited Mar. 14, 2018).

²³ *Environmental Considerations*, CAL. DEP’T OF TRANSP., <http://www.dot.ca.gov/hq/tpp/offices/ogm/environment.html> (last visited Mar. 14, 2018).

²⁴ *Id.*

²⁵ Julie Chao, *Air Pollution Down Thanks to California’s Regulation of Diesel Trucks*, BERKELEY LAB (Dec. 11, 2014), <http://newscenter.lbl.gov/2014/12/11/air-pollution-down-thanks-to-californias-regulation-of-diesel-trucks/> (last visited Mar. 14, 2018).

²⁶ *Id.*

Management Districts (AQMDs) in California.²⁷ AQMDs have authority to set and implement state plans in compliance with state and federal law, subject to approval by the CARB.²⁸ CARB is charged with submitting the state plans to the EPA.²⁹ CARB is also responsible for regulating mobile sources of air pollution and sets specific motor vehicle emission standards.³⁰ AQMDs regulate fixed sources of air pollution, which require AQMD permits to operate.³¹ Although state and federal agencies play a role in harbor governance, state law takes precedence in all California ports. Additionally, the Port of Los Angeles' CTP is a central element of the San Pedro Bay Ports Clean Air Action Plan (CAAP)—a landmark air quality plan that established the most comprehensive, far-reaching approach to improve air quality in the Ports region and to reduce health risks from maritime goods-movement-related-activities.³² Together, these federal and state environmental laws give government officials and local communities tools to challenge port development and implement tougher environmental standards.

B. DRAYAGE TRUCKS: PURPOSE AND DRAY-OFF PROBLEM

Drayage is the transportation of goods over a short distance and can include the trucking of containerized cargo from port to port or to a rail yard.³³ Usually, drayage means movement of goods between short distances as part of the supply chain process. Today, port drayage includes short-hauls from ocean ports to a rail ramp, warehouse, or other destination.³⁴ Drayage trucks tend to be older vehicles with little or no emission controls.³⁵ These vehicles tend to congregate near ports and rail yards and emit significant amounts of smog-forming NOx and toxic soot PM.³⁶

²⁷ *Environmental Impact Report, Executive Summary*, S. COAST AIR QUALITY MGMT. DIST. ES-2 (2003), http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2003/2003-aqmp/4_ex_sum04063DF944BF.pdf.

²⁸ *Id.*

²⁹ *Authority*, S. COAST AIR QUALITY MGMT. DIST., <http://aqmd.gov/home/about/authority>.

³⁰ CAL. HEALTH & SAFETY CODE §§ 40000, 43018 (West 2006). CARB exercises this authority under a Clean Air Act waiver permitting it to set its on-road vehicle emission standards. 42 U.S.C. § 7543(b) (2012).

³¹ CAL. HEALTH & SAFETY CODE § 40000 (West 2006).

³² *San Pedro Bay Ports: Clean Air Action Plan 2017*, PORT OF L.A. 16 (July 2017), https://www.portoflosangeles.org/pdf/CAAP_2017_Draft_Document-Final.pdf.

³³ *What is Drayage?*, CONTAINERPORT GROUP, INC., (May 16, 2017), <https://www.containerport.com/what-is-drayage/> (last visited Mar. 14, 2018).

³⁴ Alisha, *What is Drayage?*, DEDOLA GLOBAL LOGISTICS (Jan 25, 2012), <https://dedola.com/2012/01/what-is-drayage/> (last visited Mar. 14, 2018).

³⁵ *Overview of The Statewide Drayage Truck Regulation*, CAL. AIR RES. BD. 1 (July 3, 2013), <https://www.arb.ca.gov/msprog/onroad/porttruck/regfactsheet.pdf>.

³⁶ *Id.*

92 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

Reducing emissions from these trucks is necessary to meet federally imposed clean air standards and to reduce adverse health effects, especially on nearby communities.³⁷

One of the main issues is truck drivers trying to outsmart the law by purchasing new trucks, yet still using their old ones, by a practice known as “dray-off.” A “dray-off” is the transfer of cargo from a clean drayage truck to an older/dirtier truck (or vice versa).³⁸ Licensed Motor Carriers (LMC) are violating the CTP when they use a CTP compliant truck to pick up or drop off a container to and from a port’s terminal, but switch the container from the compliant “clean” truck to a non-CTP compliant “dirty” truck outside of the terminal.³⁹ Ultimately, truck drivers that engage in dray-offs are circumventing regulatory requirements, adversely impacting the air quality of the surrounding communities, and fostering an uncompetitive business environment.⁴⁰ Even though the truck companies can save money by avoiding the CTP requirements, these illegal activities cause air pollution to the local communities and need to be stopped.

III. CLEAN TRUCK PROGRAMS IN CALIFORNIA PORTS

In December 2007, CARB approved a new regulation to reduce emissions from drayage trucks transporting cargo to and from California’s ports and intermodal rail yards.⁴¹ LMC and Independent Owner Operators that transported cargo to and from California’s ports or intermodal rail facilities had to register their 1994 and newer Class 8 diesel-fueled trucks in the CARB Drayage Truck Registry by September 30, 2009.⁴² To reduce truck emissions, the Ports of Los Angeles and Long Beach adopted Clean Truck Programs in 2007 and 2008, requiring the

³⁷ *Id.*

³⁸ Dray-offs occur for two reasons: to avoid CARB requirements and to save money. It happens because some companies try to either save money on buying new trucks that are in compliance with the CTP or due to a lack of governmental funding to make an old truck replacement. Strict air requirements for trucks may influence some truck owners to participate in the illegal practice of transferring goods from “clean” trucks to “dirty” trucks off port grounds. John Haveman, *Driver-LMC Relationships in Port Drayage: Effects on Efficiency, Innovation, and Rates*, MARIN ECON. CONSULTING 3 (Aug. 14, 2014), http://www.marineconomicconsulting.com/whitepapers/MEC_DrayageDrivers_081414.pdf.

³⁹ *Standard Operating Procedure For Reporting and Handling of Potential Container Switch (Dray-Off) Incidents*, PORT OF L.A. 1, https://www.portoflosangeles.org/ctp/CTP_Dray_Off_Reporting_Procedures.pdf (last visited Mar. 19, 2018).

⁴⁰ *Id.*

⁴¹ *Overview of The Statewide Drayage Truck Regulation*, CAL. AIR RES. BD. 1, <https://www.arb.ca.gov/msprog/onroad/porttruck/regfactsheet.pdf> (last visited Mar. 19, 2018).

⁴² *California Air Resources Board*, PORT OF L.A., https://www.portoflosangeles.org/ctp/ctp_carb.asp (last visited Mar. 14, 2018).

use of cleaner trucks and a host of other essential requirements.⁴³ Because thousands of diesel trucks serve the Ports of Los Angeles and Long Beach every day, emissions from moving all those products and goods worsen smog and afflict residents in harbor-area communities with higher asthma rates and cancer risk in what has been labeled the “diesel death zone.”⁴⁴

A. CLEAN TRUCK PROGRAMS IN LONG BEACH AND LOS ANGELES

Coexisting with refineries, freeways, and the congested behemoth twin port complex, the South Bay and Harbor Area are home to a relatively high number of people with asthma.⁴⁵ One of the reasons the Ports of Los Angeles and Long Beach adopted an aggressive, comprehensive strategy in late 2006 was to reduce port-related emissions by at least 45% over five years and to spur the technology advancements needed to clean the air and improve resident’s health.⁴⁶ One of the first major proposed initiatives was the CTP, which was developed to mitigate the adverse health impacts of goods movement on the surrounding communities.⁴⁷ The CTP places restrictions on the type of trucks that are allowed to enter the port, applying standards that gradually increased through the four-year implementation period of the program.⁴⁸ Under the CTP, ports initially adopted various measures designed to phase out the use of older trucks and admit to the port only newer modeled cleaner trucks.⁴⁹ The articulated goal of the CTP was to cut air pollution from port trucks by

⁴³ Morgan Wyenn, *Court Orders Long Beach to Analyze the Environmental Impacts of the Modified Clean Trucks Program*, NAT. RES. DEF. COUNCIL, <https://www.nrdc.org/experts/morgan-wyenn/court-orders-long-beach-analyze-environmental-impacts-modified-clean-trucks> (last visited Mar. 14, 2018).

⁴⁴ The area stretching from Long Beach to East Los Angeles is what environmental activists call the “diesel death zone.” Emissions from trucks, ships, trains and other diesel-powered sources envelop the region. Appendix B shows how different vehicles contribute to smog in greater Los Angeles. A program campaign ensued to raise work and environmental standards at the Ports of Los Angeles and Long Beach by converting port trucks to clean vehicles. Scott L. Cummings, *Preemptive Strike: Law in the Campaign for Clean Trucks*, 4 U.C. IRVINE L. REV. 939 (2014), <http://scholarship.law.uci.edu/ucilr/vol4/iss3/3> (last visited Mar. 14, 2018).

⁴⁵ Donna Littlejohn, *Port Pollution Cleanup Partially Credited With Fewer Child Asthma-Related Hospital Visits in Harbor Area*, DAILY BREEZE (Jun. 7, 2015), <http://www.dailybreeze.com/health/20150607/port-pollution-cleanup-partially-credited-with-fewer-child-asthma-related-hospital-visits-in-harbor-area> (last visited Mar. 14, 2018).

⁴⁶ *Background, San Pedro Bay Ports Clean Air Action Plan*, PORT OF L.A., <https://www.portoflosangeles.org/environment/caap.asp> (last visited Mar. 14, 2018).

⁴⁷ Tayler Durchslag-Richardson, et al., *Benefit-Cost Analysis of the Ports of Los Angeles and Long Beach Clean Truck Program*, UNIV. OF S. CAL. SCH. OF POL’Y, PLANNING, AND DEV. REV. 2 (2011), https://priceschool.usc.edu/files/documents/masters/research/MPP_11.pdf.

⁴⁸ *Id.*

⁴⁹ Sean M. Sherlock, *Ninth Circuit Court of Appeals Strikes Down Port of LA’s Clean Trucks Provision*, SNELL & WILMER DEVELOPING NEWS (Sept. 27, 2011), <https://www.swlaw.com/search/>

94 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

more than 80% within five years.⁵⁰ Under the CTP proposal, with the assistance of a port-sponsored grant subsidy, drayage truck owners would scrap and replace the oldest of approximately 16,000 trucks and retrofit others.⁵¹

In 2008, the Ports of Los Angeles and Long Beach used their tariff authority to allow only concessionaires operating “clean” trucks to enter port terminals without having to pay a new truck impact fee at the gate.⁵² According to the CTP, concession companies would be required to use only trucks that meet the CAAP standard.⁵³ However, this standard does not prevent the dray-off practice that takes place outside the ports because truck companies do not have enough funds to buy new trucks and there is not a market for their old “dirty” trucks due to the CAAP standard.⁵⁴

Under the CTP, there are several stages to establish a progressive ban on polluting trucks: (1) October 1, 2008: All pre-1989 trucks were prohibited from entering the Port; (2) January 1, 2010: 1989-1993 trucks were banned, in addition to 1994-2003 trucks that had not been retrofitted; (3) January 1, 2012: All trucks that did not meet the 2007 Federal Clean Truck Emissions Standards were banned from the Port.⁵⁵ To promote a quick replacement of older, high-polluting trucks with newer, lower-emission trucks, funding for truck retrofits and new vehicles came from a number of sources,⁵⁶ as well as the Port of Los Angeles’ imple-

all/?keywords=Ninth%20Circuit%20Court%20of%20Appeals%20Strikes%20Down%20Port%20of%20LA%E2%80%99s%20Clean%20Trucks%20Provision (last visit Mar. 21, 2018).

⁵⁰ Scott L. Cummings, *Preemptive Strike: Law in the Campaign for Clean Trucks*, 4 U.C. IRVINE L. REV. 939, 1111 (2014), <http://scholarship.law.uci.edu/ucilr/vol4/iss3/3> (last visited Mar. 14, 2018).

⁵¹ Assembly Comm. on Lab. and Emp., AB 950 A, Q (May 4, 2011), http://www.leginfo.ca.gov/pub/11-12/bill/asm/ab_0901-0950/ab_950_cfa_20110502_153319_asm_comm.html (last visited Mar. 14, 2018).

⁵² *San Pedro Bay Ports Clean Air Action Plan*, PORT OF L.A. 1 (2007), https://www.portoflosangeles.org/newsroom/2007_releases/news_041207ctp_qa.pdf.

⁵³ The standard was defined in 2007 by the EPA as newer or retrofitted trucks manufactured no earlier than 1994 or trucks that have been replaced through the Gateway Cities Truck Modernization Program. Each year, the oldest trucks are barred from the ports until finally only those that meet the CAAP standard are permitted to work in the ports. Roger Hernandez, Assembly Comm. on Lab. and Emp., AB 621 A, T (Apr. 8, 2015), http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab_0601-0650/ab_621_cfa_20150406_134656_asm_comm.html (last visited Mar. 14, 2018).

⁵⁴ LMC would be required to pay a license fee to obtain a concession to operate in the ports and after a transition period would be necessary to directly, own, operate, and maintain their truck fleet and employ the drivers directly. *Id.* at T-U.

⁵⁵ *About the Port of Los Angeles Clean Truck Program*, PORT OF L.A., https://www.portoflosangeles.org/ctp/idx_ctp.asp (last visited Mar. 14, 2018).

⁵⁶ Proposition 1B provided \$98 million towards \$50,000 grants for the purchase of 2007 trucks. Proposition 1B, also known as the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 was passed by voters in 2006. It authorized \$1 Billion dollars in bond funding for incentives to reduce goods movement related diesel emissions. In addition to grants for

mentation of an Incentive Program in 2008.⁵⁷ The Port of Long Beach provided \$44 million in incentives to concessionaires that already have committed to deploying new privately funded clean trucks into drayage service in advance of CTP schedule requirements and \$20,000 to paid program participants for each EPA 2007-compliant truck used at the port.⁵⁸ To qualify for the incentive program, trucks had to be funded privately and be committed to make an average of six trips per week for five years.⁵⁹ Incentive program participants also could apply to receive a cash “Efficient Use” incentive payment of \$10 per port dray with their ’07-compliant truck if they achieved a target of 600 qualified drays in and out of the ports of Los Angeles and Long Beach and 300 of those drays were for Port of Los Angeles cargo during the first year of the CTP.⁶⁰ The per-truck payout limit for this additional incentive would be \$10,000.⁶¹ The Port of Long Beach provided \$37.5 million in lease to own financing as well as \$1 million for the retrofit of 1994-2003 trucks.⁶² However, the funding was still limited, and not all applicants were able to receive awards.

The Port of Long Beach and the Port of Los Angeles have undertaken the most aggressive actions to reduce emissions from this sector, ultimately mandating the use of drayage trucks that meet the new 2007 emission standard. The CTP changes the way the trucking business is regulated. It has proven successful in combating air pollution caused by port-related ships, trucks, trains, cargo-handling, and harbor craft by the attributed 80% reduction in truck emission in 2013.⁶³ As a result, most ports in the United States have developed programs that regulate emissions from diesel fuel engines and thereby have improved air quality and public health.⁶⁴

Clean Trucks, Prop 1B provided money for many goods movement related projects including grade separations, highway improvements, and other port related projects. *Regulation and Response at the San Pedro Bay Ports*, METRANS TRANSP. CTR. 1, 64 (May 2013), https://www.metrans.org/sites/default/files/research-project/08-06_Giuliano_final_0_0.pdf.

⁵⁷ *Grants and Funding Opportunities*, PORT OF L.A., https://www.portoflosangeles.org/ctp/ctp_grants.asp (last visited Mar. 14, 2018).

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Regulation and Response at the San Pedro Bay Ports*, METRANS TRANSP. CTR. 1, 64 (May 2013), https://www.metrans.org/sites/default/files/research-project/08-06_Giuliano_final_0_0.pdf.

⁶³ Melissa Lin Perrella, *Five Year Anniversary of the Port of LA’s Clean Truck Program*, NAT. RES. DEF. COUNCIL (Sept. 24, 2013), <https://www.nrdc.org/experts/melissa-lin-perrella/five-year-anniversary-port-las-clean-truck-program> (last visited Mar. 14, 2018).

⁶⁴ Calendar year 2016 marked the Port of Los Angeles’ highest reduction of all key pollutants: diesel particulate matter (DPM) emissions have fallen by 87%; sulfur oxides (SOx) emissions

96 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10]

B. ROADBLOCKS TO IMPLEMENTATION

Even though the CTP achieves its purpose of cutting air pollution from port trucks, truck companies deal with the reality of changing their old trucks. Officials from the Port of Los Angeles, the Port of Long Beach, and the South Coast Air Quality Management District (SCAQMD)⁶⁵ provided subsidies: from \$20,000 for a new clean diesel to \$142,000 for a liquefied natural gas (LNG).⁶⁶ Truck drivers were encouraged to buy LNG,⁶⁷ and they did so because they wanted to drive cleaner and newer trucks. However, LNG trucks started to break down right away, leading not only to a disruption in business but also to an inability to sell LNG trucks. As a result, trucks cannot be resold because they are expensive to repair. Additionally, LNG trucks were not powerful enough to haul loaded containers from the ports: the truck slowed to 25 miles per hour (mph) at the slightest grade even when other trucks were going 55 mph.⁶⁸ Truck companies use these trucks only to haul empty containers over short distances.⁶⁹

C. OAKLAND'S COMPREHENSIVE TRUCK MANAGEMENT PROGRAM

In October 2009, the Oakland Board of Port Commissioners approved a truck ban that is consistent with the January 2010 CARB deadline for drayage trucks.⁷⁰ Effective January 1, 2010, the ban required that Seaport facility operators deny entry to drayage trucks that could not demonstrate compliance with CARB's January 2010 emissions requirements listed in Appendix D. In response to the Maritime Air Quality

have plummeted by 98%; and nitrogen oxide (NOx) emissions have dropped by 57%. *Emissions at Historic Lows While Cargo at Historic High at the Port of Los Angeles*, PORT OF L.A. (Aug. 18, 2017), <https://www.portoflosangeles.org/environment/progress/news/historic-low-emissions-port-los-angeles/> (last visited Mar. 14, 2018).

⁶⁵ To facilitate compliance with the federal CAA and to apply the state air quality program, the California state legislature created the South Coast Air Quality Management District (SCAQMD) together with other regional AQMDs. SCAQMD develops regulations designed to achieve public health standards by reducing emissions from business and industry for the Ports of Los Angeles and Long Beach. Regulations, S. COAST AIR QUALITY MGMT. DIST., <http://www.aqmd.gov/home/regulations> (last visited Mar. 14, 2018).

⁶⁶ Emily Guerin, *How local ports reduced pollution, but lost trust among truck drivers among the way*, 89.3 KPCC (March 13, 2017), <http://www.scpr.org/news/2017/03/13/69667/how-local-ports-reduced-pollution-but-lost-trust-a/> (last visited Mar. 14, 2018).

⁶⁷ LNG is natural gas that has been converted to liquid form for ease and safety of non-pressurized storage or transport.

⁶⁸ See Guerin, *supra* note 66, at 11.

⁶⁹ *Id.* at Appendix C (showing the percentage of port cargo moved by LNG trucks, 2009-2016).

⁷⁰ *Clean Trucks*, PORT OF OAKLAND, <http://www.oaklandseaport.com/seaport-resources/trucker-resources/comprehensive-truck-management-program/> (last visited Mar. 14, 2018).

Improvement Plan's (MAQIP) regulations and other stakeholder interests, the Port of Oakland developed the CTMP to set forth plans and actions to comprehensively address air quality, safety and security, business and operations, and community issues associated with drayage operations.⁷¹

As a step toward compliance with the statewide Emission Reduction Plan, including the Drayage Truck Rule, and in response to public pressure and to address the needs of the neighboring community to improve its quality of life, the Port of Oakland has developed an air quality improvement program: the CTMP. The first phase of CTMP required the LMC to execute a Secure Truck Enrollment Program (STEP) agreement with the Port of Oakland.⁷² The second phase, initiated in January 2010, required the Licensed Motor Carriers to enter truck information into the Port Registry database by April 2010.⁷³ The activities at the port were regulated or terminated for those who did not comply and for those who did not meet the modern emissions standards through a truck retrofit or replacement program.⁷⁴ The two-phase implementation (Phases 1 and 2) helped satisfy the core goals of the Port of Oakland including increased port security and decreased emissions from the heavy-duty diesel vehicles.⁷⁵

The Clean Trucks component of the CTMP was developed to help ensure that drayage truck-related air emissions are reduced as quickly as possible.⁷⁶ It also addresses the relationship between the CTMP, CARB regulations, and the Port's drayage truck ban, and provides information on the Port's role in helping truck owners comply with these requirements.⁷⁷

⁷¹ *Port of Oakland Maritime Air Quality Improvement Plan Progress Report Meeting*, PORT OF OAKLAND 1, 4 (Jan. 10, 2013), http://www.portoakland.com/files/PDF/environment/maqip_outcomes_memo.pdf.

⁷² *Comprehensive Truck Management Program*, PORT OF OAKLAND, <http://www.portoakland.com/port/seaport/comprehensive-truck-management-program/> (last visited Mar. 14, 2018).

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Comprehensive Truck Management Program*, PORT OF OAKLAND, <http://www.oaklandseaport.com/seaport-resources/trucker-resources/comprehensive-truck-management-program/> (last visited Mar. 14, 2018).

⁷⁷ *Id.*

98 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

IV. ARGUMENT

A. THE PORT OF OAKLAND'S CTMP FALLS SHORT OF THE EFFICACY OF LOS ANGELES'S AND LONG BEACH'S CTP

The ports of Los Angeles and Long Beach are known locally as a “diesel death zone” because together, they constitute the largest single source of diesel emissions in the greater Los Angeles area.⁷⁸ Moreover, the Port of Los Angeles now has a direct relationship with the Licensed Motor Carriers for the first time because of a Licensed Motor Carriers concession program.⁷⁹ The program allows for greater accountability and monitoring of the public health, safety, and environmental impact of the trucks entering the port.⁸⁰

Vehicle microscopic simulation and emission models, combined with an air pollutant dispersion model and a health assessment tool measure the progress of the CTP.⁸¹ As a result, traffic on two busy freeways, the I-710 and the I-110, as well as some heavily trafficked arterial roads were analyzed to estimate the health impacts caused by drayage truck emissions of PM for four different years that correspond to deadlines for the CTP: 2005, 2008, 2010, and 2012.⁸² Appendix E shows that the main health income is mortality from PM: it results in approximately six cases per year with a corresponding cost in excess of \$40 million; elderly people (65 years old and over) are primarily affected with 3.20 cases per year.⁸³ However, these costs decreased by 36%, 90%, and 96% after accounting for the requirements of the 2008, 2010, and 2012 CTP deadlines, respectively.⁸⁴ These results quantify the magnitude of the social costs generated by drayage trucks in the Alameda corridor,⁸⁵ suggesting

⁷⁸ Genevieve Giuliano, et al., *Evaluation of the Terminal Gate Appointment System at the Los Angeles/Long Beach Ports*, CTR. FOR INT'L TRADE AND TRANSP. 13 (February 2008), <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.410.508&rep=rep1&type=pdf>.

⁷⁹ *Port of Los Angeles Marks One-Year Anniversary, Successes of Clean Truck Program*, THE PORT OF L.A. NEWS 2, https://www.portoflosangeles.org/ctp/CTP_One_Year_Successes.pdf (last visited Mar. 14, 2018).

⁸⁰ *Id.*

⁸¹ Gunwoo Lee, et al., *Assessing Air Quality and Health Benefits of the Clean Truck Program in the Alameda Corridor, CA*, 46 TRANSP. RES. PART A: POL'Y AND PRAC. 1177 (2012), <http://www.sciencedirect.com/science/article/pii/S0965856412000808?np=y> (last visited Mar. 14, 2018).

⁸² *Id.*

⁸³ Mana Sangkapichai, et al., *An Analysis of the Health Impacts from PM and NOx emissions resulting from train operations in the Alameda Corridor, CA*, UNIV. OF CAL. TRANSP. CTR. 1, 15 (Jan. 2010), <https://escholarship.org/uc/item/4n34t20t> (last visited Mar. 14, 2018).

⁸⁴ See Gunwoo, *supra* note 81, at 14.

⁸⁵ A 20-mile railroad express line that connects the port of Long Beach and Los Angeles to the transcontinental rail network east of downtown Los Angeles.

that these costs justified replacing drayage trucks operating there, and indicating that the CTP likely exceeded its target.⁸⁶

In contrast, the Port of Oakland appears to have fulfilled the 2010 goals for heavy-duty diesel vehicle measures under the Emission Reduction Plan, which puts them on track to meet an estimated 32% reduction in mortality caused by primary diesel PM associated with goods movement in California by the year 2020 (CARB 2006a).⁸⁷ An additional 48% reduction in emissions from 2010 levels will be needed to reach the 2020 goal of reduced mortality.⁸⁸ Future proposed measures include the adoption of trucks with newer and cleaner engines, continued use of CARB-verified level 3 DPFs, and expansion of the enforcement zone for clean drayage trucks to include the majority of the South Coast Air Basin.⁸⁹ Much of the mortality reduction is projected to occur near the ports or along major truck routes leading to and from the ports.

Today, the 11,000 drayage trucks servicing the Ports of Los Angeles and Long Beach terminals are all 2007 or newer models.⁹⁰ The Port of Oakland's CTMP shares many aspects of the CTP, but on a smaller scale. In comparison, in 2009, at the behest of former Oakland Mayor Ron Dellums, CARB agreed not to enforce phase one regulations of the CTMP for six months.⁹¹ While the Ports of Los Angeles and Long Beach made the companies comply with the CTP and replace the trucks, the Port of Oakland allowed the trucks to be retrofitted.⁹²

⁸⁶ With annual health costs from drayage truck emissions in excess of \$440 million (the estimated health impacts from PM_{2.5} exposure in 2005), the payback period for replacing all of the 11,000 drayage trucks serving the SPBP complex is no more than 4 years, assuming that a new truck costs \$150,000. Even this admittedly simplistic calculation suggests that the social benefits of implementing the Clean Truck Program far exceed the costs of this program and clearly justify its implementation. See Gunwoo, *supra* note 81, at 14.

⁸⁷ Toshihiro Kuwayama, et al., *Particulate Matter Emissions Reductions Due to Adoption of Clean Diesel Technology at A Major Shipping Port*, *AERSOL SCI. & TECH.* 35-36 (2012), <http://www.tandfonline.com/doi/pdf/10.1080/02786826.2012.720049?needAccess=true> (last visited Mar. 14, 2018).

⁸⁸ *Id.* at 36.

⁸⁹ *Id.*

⁹⁰ *Air Quality*, PORT OF LONG BEACH, <http://www.polb.com/news/displaynews.asp?NewsID=941> (last visited Mar. 14, 2018).

⁹¹ Brittany Schell, *New Emissions Rules Expected to Improve West Oakland Air Quality*, OAKLAND NORTH (2012), <https://oaklandnorth.net/2012/07/18/new-emission-rules-expected-to-improve-west-oakland-air-quality/> (last visited Mar. 14, 2018).

⁹² Press Release, Oakland Board of Port Commissioners Bans Dirty Trucks, Port of Oakland (Oct. 9, 2009), <http://www.portofoakland.com/press-releases/press-release-184/> (last visited Mar. 14, 2018). According to research conducted by Berkeley scientist Robert Harley and based on data collected from thousands of trucks near the Port of Oakland, emissions of black carbon, a key component of diesel PM and a pollutant linked to global warming, was slashed 76% from 2009 to 2013. Also, emissions of oxides of nitrogen, which leads to smog, declined 53%. During this period, the median age of truck engines declined from eleven to six years, and the percentage of trucks equipped with diesel particulate filters increased from 2% to 99%. Comparable emission reductions

100 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

Another impact of the Port of Oakland's program measured emission factor distributions for diesel trucks operating at the port before and following the implementation of the emissions control rule.⁹³ A comparison of emissions measured before and after the implementation of the truck retrofit/replacement rule shows a 54 plus-minus (\pm) 11% reduction in the fleet-average BC emission factor, accompanied by a shift to a more highly skewed emission factor distribution.⁹⁴ Although only particulate matter mass reductions were required in the first year of the program, a significant decrease in the fleet-average NOx emission factor ($41 \pm 5\%$) was observed, most likely due to the replacement of older trucks with new ones.⁹⁵ However, part of the problem in communities with heavy truck traffic is that diesel engines last a very long time and older trucks operating on the road still emit the black smoke that used to be the signature of all diesel-powered eighteen-wheelers.⁹⁶

The Ports of Los Angeles and Long Beach have stricter requirements for drayage trucks entering their facilities than the Port of Oakland. So, the Port of Oakland should consider implementing the concession agreement and including stricter parts from CTP to CTMP to improve air quality. The Ports of Los Angeles and Long Beach measured decreased emissions levels in the area by 2012 due to the trucks being retrofitted with new technology as required to come into compliance with the 2007 CARB standards.⁹⁷ Consequently, air pollution dropped quickly and dramatically in both ports. Similarly, air pollution can be decreased at Oakland because West Oakland can be compared to the "diesel death zone" of the Ports of Los Angeles and Long Beach. Emissions from the Port of Oakland envelop West Oakland and impact the community's health; it is an environmental nightmare with health effects. Therefore, the Los Angeles CTP now serves as a model for sustainable operations in all West Coast ports, and the Port of Oakland should adopt the Port of

could normally take up to a decade through the gradual replacement of old trucks or natural fleet turnover. In this case, the improvements are attributed to the ARB's DTR and to the CTMP at the Port of Oakland, which require vehicle owners serving the port to clean up their trucks by either replacing them with newer models or installing diesel particulate filters. Study Finds Truck Fleet Clean-Up Dramatically Decreases Engine Emissions Near Port of Oakland, CAL. AIR RES. BD. 15-31 (July 25, 2017), <https://ww2.arb.ca.gov/news/study-finds-truck-fleet-clean-dramatically-decreases-engine-emissions-near-port-oakland> (last visited Mar. 21, 2018).

⁹³ Concentrations of these species along with carbon dioxide were measured in the exhaust plumes of individual diesel trucks as they drove by en route to the Port.

⁹⁴ Timothy R. Dallmann, et al., *Effects of Diesel Particle Filter Retrofits and Accelerated Fleet Turnover on Drayage Truck Emissions at the Port of Oakland*, ENVTL. SCI. & TECH. (2011), <http://pubs.acs.org/doi/abs/10.1021/es202609q> (last visited Mar. 14, 2018).

⁹⁵ *Id.*

⁹⁶ See Schell, *supra* note 92, at 15.

⁹⁷ *Air Quality*, PORT OF LONG BEACH, <http://www.polb.com/environment/air/default.asp> (last visited Mar. 14, 2018).

Los Angeles' CTP to reduce air emissions and support the statewide vision for more sustainable freight movement.

B. THE PORT OF OAKLAND SHOULD ADOPT STRATEGIES
IMPLEMENTED BY THE CTP

The Port of Oakland should consider adopting the CTP strategies because of the success of the first phase CTP, the demand for more efficient trucks, and the great diversity of efficiency technologies that are already available to consumers. Implementing this CTP will bring comprehensive environmental, community, and labor standards.

The CTP and CTMP were not intended to focus on the inefficiencies in the system, but rather on air pollution, an externality associated with trucking services, primarily drayage, provided at the port. These programs were designed to reduce the environmental impact of truck emissions related to drayage services and to improve the air quality for people who work or live near the port. Therefore, the Bay Area Air Quality Management District (BAAQMD) should continue to work with the community and the Port to implement its studies of trucking operations in the West Oakland community to reduce the trucks' impact on the air.

The most compelling reason to follow the steps taken by the Ports of Los Angeles and Long Beach CTPs is to improve the health conditions of the West Oakland neighborhood. Trucks that travel to and from the Port of Oakland and within the community are associated with several interrelated health issues.⁹⁸ The health effects of these air pollutants to residents of local communities include asthma, other respiratory diseases, cardiovascular disease, lung cancer, and premature mortality, impacting residents as well as the drivers of the trucks.⁹⁹ In addition, children exposed to truck-generated smog are absent more often from school and emergency room visits increase dramatically.¹⁰⁰ Trucks also emit noise—much more so than conventional automobiles—which can cause stress and annoyance, disrupt sleep, impact the school performance of children, and cause myocardial infarctions (a blockage of blood flow to the heart muscle).¹⁰¹ Furthermore, increased numbers of trucks in the community can translate to increased risk of truck collisions with other vehicles, bicyclists, and pedestrians, as well as broader transportation is-

⁹⁸ See Seto, *supra* note 13, at 2.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

102 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

sues, such as blight, road wear, parking issues, social cohesion, and physical activity.¹⁰²

Due to these health conditions, the Port of Oakland should adopt the CTP's strategies, such as replacing and mandating to phase out the oldest, dirtiest diesel trucks, because they have showed improvements in health rates in the ports of Los Angeles and Long Beach. There is no longer black smoke seen coming from truck smokestacks as they travel through Wilmington (a neighborhood in the Los Angeles Harbor Region area of Los Angeles, California) and trucks can no longer endlessly idle as they wait for containers to be loaded.¹⁰³ Furthermore, respiratory illnesses dramatically decreased after the Port of Long Beach installed portable air filter systems at The Willow Tree Child Care Infant and pre-school program.¹⁰⁴

The Port of Oakland's trucks are not the only source of air emissions in the community because trucks from the post office and other businesses in the area contribute to emissions. Moreover, there are many vehicles on surrounding freeways that contribute to community air pollution and noise. There are also other sources of noise, such as the Bay Area Rapid Transit (BART) and other passenger and freight trains. Ultimately, all these sources affect public health in West Oakland. West Oakland residents bear the increasing burden of all these transportation pathways. Due to the close position of the residential area with industrial land, residents are exposed to an onslaught of environmental hazards.¹⁰⁵ Poor health from one pathway (for instance, exposure to noise) may make residents more susceptible to the impacts of another aspect (for example, air pollution). However, collaborative fights against the air pollution in the neighborhood can lead to improvements similar to the positive changes in Los Angeles and Long Beach.

C. POSSIBLE CONSEQUENCES IN THE PORT OF OAKLAND ARISING FROM THE FAILURE TO ADOPT A BETTER STANDARD

The consequences of the inaction can be dramatic for the Port of Oakland and its neighborhood because they depend on each other: both breathe the same air though, and they both need it clean. Diesel pollution has been known to have a significant health impact because it can cross

¹⁰² *Id.*

¹⁰³ Barbara Ostrov, *Pollution and Health at the Ports of Los Angeles and Long Beach*, UNIV. OF S. CAL. CTR. FOR HEALTH JOURNALISM FELLOWSHIP BLOG (July 15, 2010), <https://www.centerforhealthjournalism.org/blogs/pollution-and-health-port-los-angeles> (last visited Mar. 14, 2018).

¹⁰⁴ See Littlejohn, *supra* note 45, at 8.

¹⁰⁵ See Seto, *supra* note 13, at 2.

over the blood-brainer barrier causing asthma, chronic lung disease, and lung and brain cancer.¹⁰⁶ If the trucks are not fixed, West Oakland's children will continue to have respiratory problems, adults will continue to have a high asthma rate because of the diesel emissions, and the port's truck traffic will be not regulated in the community.

Moreover, poor air quality will raise disputes between the Port of Oakland and the West Oakland community. For example, the West Oakland Environmental Indicators Project has filed a federal complaint alleging that by forging ahead with a planned port expansion, the city and Port of Oakland are ignoring the disproportionate health impacts on West Oakland residents.¹⁰⁷ The tension between the two may escalate in the future because of the new administration in Washington that could change the priorities at the EPA. Although much uncertainty exists as to the future decisions of the current administration, the CTP strategies should be implemented to protect the high percentage of low-income and minority populations bearing the burden of higher exposure to diesel emissions. Currently, many small truck companies have had to close their businesses because of the high prices for the new compliant trucks, and the registration. The port drayage industry is not against clean technologies, but technologies must be affordable and commercially viable.

D. TRANSFORMATION OF THE TRUCKING INDUSTRY AND ITS CONSEQUENCES

Even though the CTP brings fundamental changes in the port drayage industry, any significant reorganization of the industry can lead to pitfalls. The transition from a regime of low and loosely monitored safety and emissions standards to one with tight controls on each is a complicated matter. The difficulties associated with such a transition include significant supply disruptions and the dislocation of substantial numbers of industry workers.

Consistent with CARB's notoriety as the most aggressive regulatory agency in the nation, California's diesel requirements tighten emissions controls to such an extent that it is nearly impossible for all but the largest and most highly capitalized companies to comply.¹⁰⁸ Small and medium-sized trucking companies have trouble adapting to new regulations

¹⁰⁶ Ngoc Nguyen, *Tracking Air Quality Block by Block*, KAISER HEALTH NEWS (Apr. 11, 2017), <https://khn.org/news/tracking-air-quality-block-by-block/> (last visited Mar. 14, 2018).

¹⁰⁷ Complaint Under Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d, EARTHJUSTICE, 1, 2, (Apr. 4, 2017), http://earthjustice.org/sites/default/files/files/2017-04-04-TitleVI_Complaint.pdf (last visited Mar. 21, 2018).

¹⁰⁸ See Hadzi-Anthich, *supra* note 20, at 4.

104 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

because many do not have the cash reserves that larger firms do to buy new trucks or retrofit old ones. Based on the research “Best and Worst States for Trucking Industry in 2016” conducted by Merchant Cash USA, “without small trucking companies, the cost of shipping could [rise] throughout the U.S.”¹⁰⁹ The cost of a truck that meets the emissions requirements set by CARB makes it difficult for individuals to own their truck. Therefore, although regulatory agencies helped with initial grants, the smaller carriers had to either leave the state or give up their trucks.¹¹⁰ The cost of buying a new truck is a major concern for many drivers and it can lead to significant loss of local business and jobs. The costly effort forced trucking companies to change the way they do business, sometimes opting to upgrade or sell an entire fleet and lease trucks instead.

BAAQMD and Alameda County are committed to provide financial support to upgrade or replace on-road diesel trucks with newer, lower-emission equipment to help drivers reduce diesel particulate emissions at the Port of Oakland.¹¹¹ However, BAAQMD and Alameda County’s grants are limited and complicated to obtain.¹¹² For example, it can cost between \$15,000 and \$25,000 to retrofit a truck with a filter, and a 2007 engine model truck can cost as much as \$65,000.¹¹³ In 2010, many truckers went out of business because of the expense.¹¹⁴ Truckers must apply for grants at least a year before they need the grant money.¹¹⁵ Thus, the smaller trucking companies and independent owner-operators go out of business because they may not be as proactive in addressing the needs they will have ten or twelve months down the line.

The primary obstacle in this plan is the fear of change. First, it is difficult to implement the CTP without leading to short-run but potentially significant disruptions in service. The Port of Oakland’s truckers face issues with the new trucks similar to complaints in Los Angeles: maintenance and repairs are expensive and the trucks are not efficient enough to conduct business. In addition, the diesel particulate filter may cause problems—constant repairs that result in delays and safety issues

¹⁰⁹ *Best and Worst States for Trucking Industry in 2016*, AJOT (Jan. 19, 2016), <https://www.ajot.com/news/best-and-worst-states-for-trucking-industry-in-2016> (last visited Mar. 14, 2018).

¹¹⁰ Megan Headley, *Are CARB’s Emission Requirements Forcing California Truckers Out of Business?*, TRUCKS.COM (Mar. 5, 2015), <https://www.trucks.com/2015/03/05/are-carbs-emission-requirements-forcing-california-truckers-out-of-business/> (last visited Mar. 14, 2018).

¹¹¹ *Trucks*, BAY AREA AIR QUALITY MGMT. DIST., <http://www.baaqmd.gov/grant-funding/businesses-and-fleets/trucks> (last visited Mar. 14, 2018).

¹¹² *Id.*

¹¹³ See Schell, *supra* note 92, at 15.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

that cause risk of fires and other truck related accidents.¹¹⁶ Even though the diesel particulate filter is designed to reduce diesel PM, it leaves a giant carbon footprint on the state when it malfunctions or damages trucks.¹¹⁷ Consequently, small businesses absorb the financial implications by raising prices or reducing services.

Therefore, the Port of Oakland should adopt the Ports of Los Angeles and Long Beach's Infrastructure Cargo Fee program or similar mechanism to ensure sufficient funding is available to meet air quality goals. If it were to do so, grants would be made available for the truck upgrades to smooth the economic expense of transition.

E. ADDITIONAL RECOMMENDATIONS

The best way to get old port trucks off the road would be for the U.S. Congress to change diesel emission policy. Currently, the EPA regulates emissions from newly manufactured heavy-duty diesel engines and has left regulation of emissions from existing engines to the states and local government authorities.¹¹⁸ To improve air quality and reduce public health hazards, the Port of Oakland should (1) ban old trucks from port facilities on a schedule that will eliminate all trucks manufactured before 2007; (2) conduct a port truck survey that investigates where port truck trips begin, how port trucks travel through the local community, and where port trucks ultimately deliver their cargo; (3) regulate and license trucking companies to encourage them to meet environmental goals; (4) finance retrofitting and replacement of old trucks, scrapping the oldest vehicles so they cannot be used elsewhere; and (5) look at the source of pollution and regulate it by monitoring the needed neighborhoods. However, the Port of Oakland should watch out for the old trucks that will be left out on the road for more than two decades. Also, leaving the regulations to the Port spurs the port to compete for business by reducing emissions standards.

V. CONCLUSION

Traffic conditions along California's major roads into the ports are often congested, and the fleet of older, or high-polluting trucks, result in elevated levels of exposure to diesel PM in adjacent communities. Emis-

¹¹⁶ *Lawsuit claims filters cause fires and excessive repairs*, COM. CARRIERS INS. AGENCY (March 5, 2015), <http://www.insure-ccia.com/articles/?p=239> (last visited Mar. 14, 2018).

¹¹⁷ *Id.*

¹¹⁸ David Bensman, *Port Trucking Down the Road: A Sad Story of Deregulation*, DEMOS 12 (July 21, 2009), <http://www.demos.org/sites/default/files/publications/Port%20Trucking%20Down%20the%20Low%20Road.pdf>.

106 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

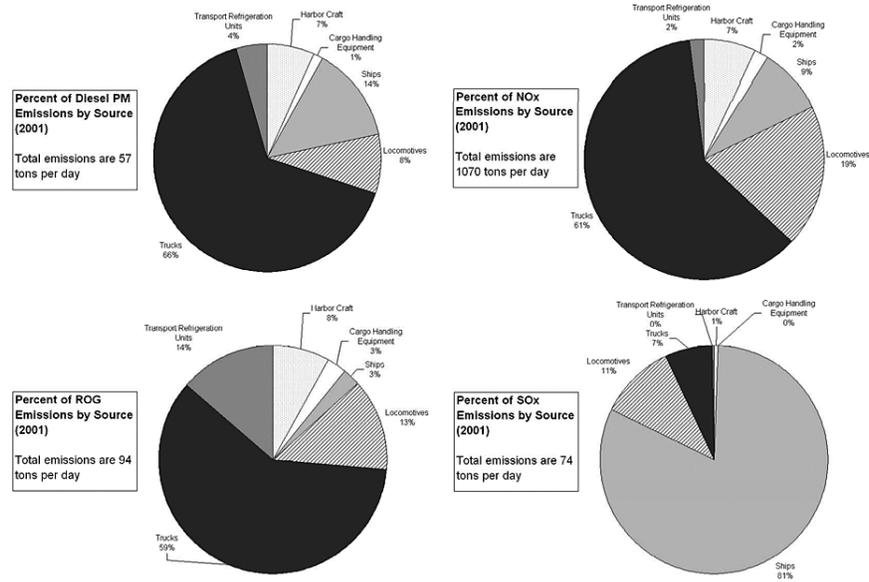
sions and resulting risks are expected to increase with future trade expansion unless substantial control measures are implemented to reduce port-related emissions. Implementing strategies from the CTP would have emission reduction benefits that the Port of Oakland should consider adopting. However, any strategy to reduce emissions from port trucks must account for a variety of issues. Chief among these problems is the ability and willingness of port truck owners to participate in desired retrofit and modernization efforts. Profit margins for port truck drivers are slim, and they lack the capacity to raise rates to generate the money to pay for the costs associated with modernization. Any attempt to use regulatory mechanisms alone to induce truck owners into paying for modernization or retrofit of their trucks could well create a shortage of trucks willing to move goods at ports.

Most of the funding programs with funding provided by CARB that are now in existence are voluntary and have had mixed participation from truck owners. Because profit margins are so low for port truck drivers, many are unwilling to assume additional expenses when they can continue to function with their currently owned trucks. One option is to establish a period during which funding for retrofits and replacements will be available. Once the period has ended, the truck owner would have to assume all expenses and would not be allowed to operate without severely restricting their ability to continue working in port service.

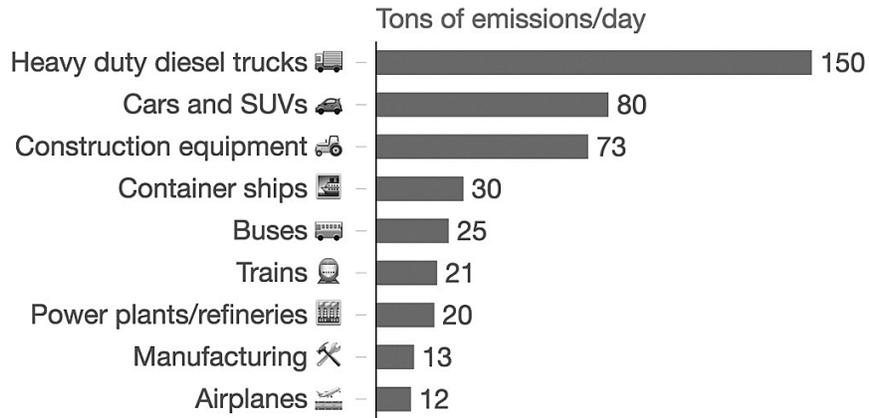
Additionally, owners and operators who do not have access to capital to pay for the needed improvements drive most of the existing port trucks. One possible solution is to have the cost of truck upgrades and retrofits financed through guaranteed loans. Drivers would receive credits that retire these loans each time a container is picked up or dropped at the port. Retrofit control technologies along with additional strategies, such as engine replacement or repower, have the potential to significantly reduce emissions from port trucks and are integral to any port truck modernization strategy.

Finally, cleaner fuels, exhaust emission reduction technologies, and alternative power systems exist for reducing harmful impacts of maritime shipping on workers and local neighborhoods alike. The Ports of Los Angeles and Long Beach have proactively addressed air quality; the Port of Oakland can do the same.

APPENDIX A. 2001 STATEWIDE GOODS MOVEMENT EMISSIONS



APPENDIX B. HOW MUCH EACH SOURCE CONTRIBUTES TO SMOG IN GREATER LA

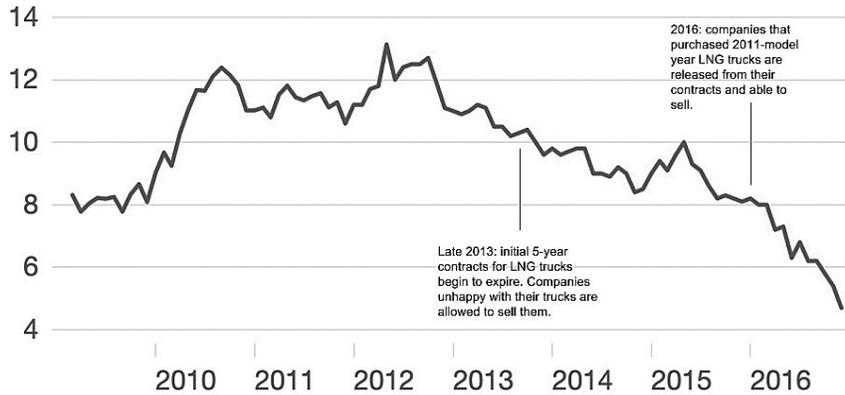


KPCC using Quartz's Chartbuilder

Data: Via South Coast Air Quality Management District; emissions are of NOx

108 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10

APPENDIX C. PERCENTAGE OF PORT CARGO MOVED BY LNG TRUCKS, 2009-2016



KPCC using Quartz's Chartbuilder

Data: Via Port of Los Angeles

APPENDIX D. CARB's 2010 EMISSION REQUIREMENTS

TRUCK ENGINE MODEL YEAR	CARB EMISSION REQUIREMENT SCHEDULE	PORT OF OAKLAND EMISSION REQUIREMENT SCHEDULE
1993 & older	Prohibited starting January 1, 2010	Prohibited starting January 1, 2010
1994 1995 1996 1997 1998 1999	Starting January 1, 2010, Reduce PM emissions by 85% (e.g. install a CARB-verified level 3 Diesel Particulate Filter)	Starting January 1, 2010, Reduce PM emissions by 85% (e.g. install a CARB-verified level 3 Diesel Particulate Filter)
2000 2001 2002 2003	And Starting January 1, 2014, meet 2007 engine emission standards	And Starting January 1, 2014, meet 2007 engine emission standards
2004	Starting January 1, 2012, Reduce PM emissions by 85% (e.g. install a CARB-verified level 3 Diesel Particulate Filter) And Starting January 1, 2014, meet 2007 engine emission standards	Starting January 1, 2012, Reduce PM emissions by 85% (e.g. install a CARB-verified level 3 Diesel Particulate Filter) And Starting January 1, 2014, meet 2007 engine emission standards
2005 & 2006	Starting January 1, 2013, Reduce PM emissions by 85% (e.g. install a CARB-verified level 3 Diesel Particulate Filter) And Starting January 1, 2014, meet 2007 engine emission standards	Starting January 1, 2013, Reduce PM emissions by 85% (e.g. install a CARB-verified level 3 Diesel Particulate Filter) And Starting January 1, 2014, meet 2007 engine emission standards
2007* & newer	Fully Compliant	Fully Compliant

*Additional requirements may apply in 2021 for all drayage trucks pursuant to CARB Regulations.

2018]

TAKING A BREATH

109

APPENDIX E. SOME SEASONAL HEALTH IMPACTS OF PM_{2.5} FROM PM EXPOSURE

Period	Scenario	PM _{2.5} Mortality Age: 30-65	PM _{2.5} Mortality Age: 65 and over	Chronic Bronchitis	Total Value (\$2005)
Winter	Baseline	\$4.47 (0.66)	\$5.15 (0.76)	\$0.22 (0.68)	\$9.84
	Scenario2	\$2.19 (0.32)	\$2.51 (0.37)	\$0.11 (0.34)	\$4.81
	Scenario3	\$1.98 (0.29)	\$2.25 (0.33)	\$0.10 (0.30)	\$4.34
Spring	Baseline	\$3.45 (0.51)	\$4.07 (0.60)	\$0.17 (0.53)	\$7.69
	Scenario2	\$1.67 (0.24)	\$1.93 (0.28)	\$0.08 (0.26)	\$3.68
	Scenario3	\$1.50 (0.22)	\$1.73 (0.25)	\$0.08 (0.23)	\$3.31
Summer	Baseline	\$4.21 (0.62)	\$5.16 (0.76)	\$0.21 (0.64)	\$9.59
	Scenario2	\$2.10 (0.31)	\$2.51 (0.37)	\$0.11 (0.32)	\$4.72
	Scenario3	\$1.88 (0.28)	\$2.25 (0.33)	\$0.09 (0.29)	\$4.22
Fall	Baseline	\$6.40 (0.94)	\$7.43 (1.09)	\$0.32 (0.97)	\$14.14
	Scenario2	\$3.17 (0.47)	\$3.65 (0.54)	\$0.16 (0.48)	\$6.98
	Scenario3	\$2.82 (0.41)	\$3.22 (0.47)	\$0.14 (0.43)	\$6.18
Year 2005	Baseline	\$18.52 (2.72)	\$21.80 (3.20)	\$0.93 (2.83)	\$41.25
	Scenario2	\$9.12 (1.34)	\$10.60 (1.56)	\$0.46 (1.39)	\$20.18
	Scenario3	\$8.18 (1.20)	\$9.46 (1.39)	\$0.41 (1.25)	\$18.05

110 GOLDEN GATE UNIV. ENVIRONMENTAL LAW J. [Vol. 10