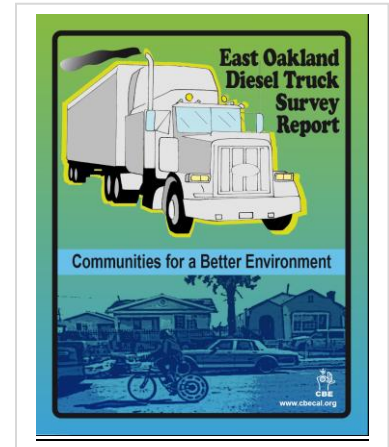


Communities for a Better Environment

East Oakland Diesel Truck Survey Summary

The movement of “goods” happens at a huge cost to air quality and the health of East Oakland residents. Everything we buy, and we buy a lot – from the clothes on your back, to the cell phone in your pocket, to the food you eat – comes with impacts to the environment and health, whether in the extraction of resources, production of products or the transport of products world-wide. Products made abroad are shipped overseas by ocean-going vessels that are more polluting than diesel trucks. Shipments have grown by about 80% in the last decade alone, and are expected to continue to increase.¹ The shipping containers that hold these goods are moved by diesel-powered machinery onto trains and/ or trucks and come to distribution centers in environmental justice communities like East Oakland. The trucks spew particulate matter (PM), nitrogen oxides, hydrocarbons and toxic pollution into the air. This is the same air that local residents breathe all day long. Diesel trucks often idle – leaving engines on while stopped or parked– in neighborhoods like in East and West Oakland.² Trucks often drive through residential streets. Heavy-duty trucks and related businesses also have impacts on residents from noise, vibrations, safety, and damage to roads.³



Diesel truck emissions are a mixture of gases and solids, including PM, carbon monoxide, sulfur oxides, and ozone precursors including volatile organic compounds and nitrogen oxides. 40 of the chemicals emitted by diesel trucks are listed as toxic air contaminants by the Environmental Protection Agency (EPA). Diesel PM can be smaller than the human eye can see and can penetrate deep into the lungs and enter the bloodstream.



UC Intern and youth working together to count a 5-axle non-Port truck at 98th Avenue and San Leandro Street.

- Exposure to diesel PM greatly increases a person’s chances of developing lung cancer, heart disease, asthma and bronchial infections.⁴ Diesel PM can aggravate allergies, asthma, bronchitis and other lung disease.⁵
- High exposure to diesel PM is especially dangerous to children, the elderly and people with existing medical conditions.⁶
- Diesel trucks that transport freight contribute to approximately 50% of total diesel PM in California.⁷
- Truck drivers often face the highest exposure to diesel exhaust and are undercompensated for health effects in the freight transport industry.⁸
- Mothers’ exposure to polycyclic aromatic hydrocarbons (PAHs) from diesel exhaust during pregnancy has been shown to lower their children’s IQ levels.⁹ Low birth weight is linked to exposure to diesel emissions.



- The Bay Area is not meeting standards for PM 2.5 set by the US Environmental Protection Agency (EPA). East Oakland flatland areas have high levels of PM 2.5 relative to the Oakland Hills and to EPA standards (See CBE's East Oakland air monitoring report).
- In the Bay Area in 2005, annual estimates of health impacts from Port (heavy-duty trucks) trucks add up to \$153 million in health costs from premature death, asthma, hospital admissions for respiratory and cardiovascular reasons, and lost work and school days.²
- East Oakland has a childhood asthma hospitalization rate 150 to 200% higher than the Alameda County rate.¹⁰ Alameda County's childhood asthma hospitalization rate is the second highest in California.¹¹ The childhood asthma rate for African American children is 2.5 times higher than the County rate; 12 times the Asian/ Pacific Islander rate and about 4 times the Latino and Caucasian rates.¹²

The Diesel Truck Survey

Communities for a Better Environment (CBE) has completed community-based participatory research projects with community members and youth to address their concerns about diesel trucks. In 2007, CBE and community members found 27 logistics or truck-related businesses in a small area of East Oakland in the Coliseum Area, and observed many trucks driving nearby or through residential areas.¹³ The heaviest truck traffic is between Interstate 880 and industrial operations. These heavy industrial land uses exist next to residential areas, resulting in incompatible uses, and negative impacts on health from industrial pollution and diesel trucks. The businesses that bring truck traffic to the area are called "magnet sources".

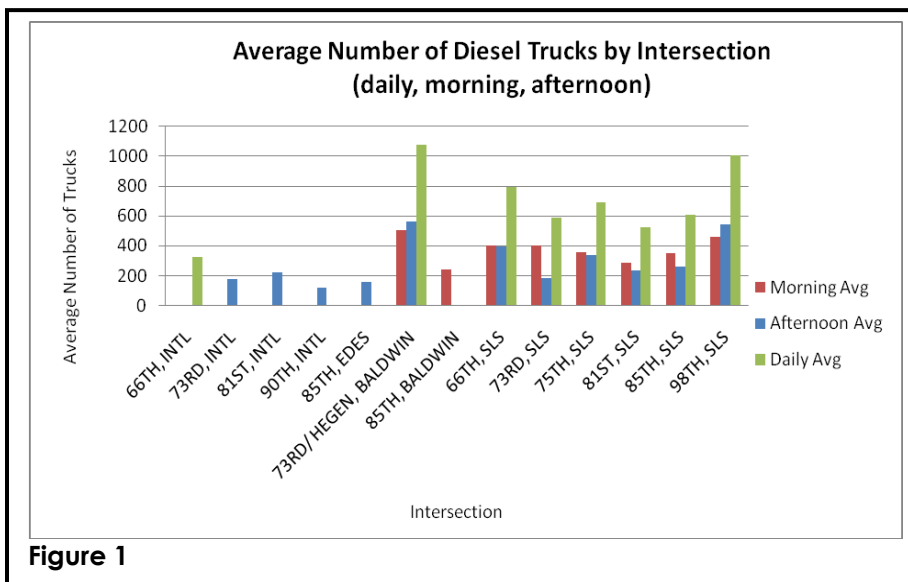
In the diesel truck survey, conducted in the summers of 2009 and 2010 (See Map 1), CBE counted 11,664 diesel trucks total and noted direction of travel in 10 days of counting for 4 hours in this area along the Interstate 880-Corridor. Diesel trucks were counted and categorized based on the number of



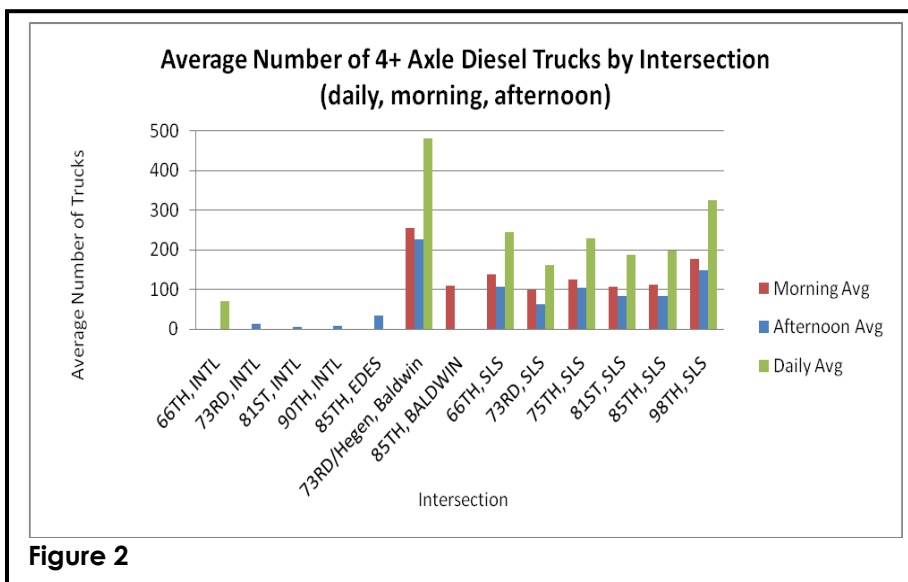
Map 1. Survey locations (green marker) and Oakland truck route (blue lines).

axles they had (the number of tires counted looking at one side of the truck). The direction of travel passing through the intersection was recorded. The areas with the most trucks counted were along San Leandro Street in the industrial area, which is near homes, schools, a library, parks, churches and a recreation center. Trucks passed nearby or through the Coliseum Gardens and Brookfield Village neighborhoods.

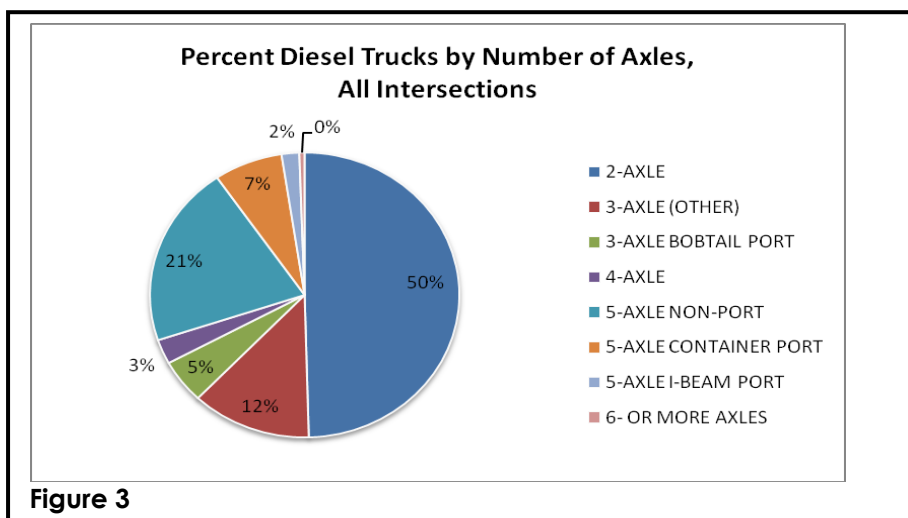




The busiest intersection surveyed was Hegenberger Road at Baldwin Street, followed by 98th Street at San Leandro Street.¹⁴ Generally, the intersections along San Leandro Street had higher daily average diesel trucks than International Blvd (See Figure 1). The difference in daily volumes of 4+ axle trucks was even more pronounced between San Leandro Street and International Blvd (See Figure 2). More 4+ axle trucks were observed in the mornings than the afternoons along the intersections on San Leandro Street.



Overall, 2-axle trucks were the largest category of trucks (See Figure 3). 5-axle non-Port trucks and 3-axle non-Port trucks made up large categories of trucks as well. Port trucks (3-axle bobtail, 5-axle I-beam and 5-axle Port container trucks added together) were a significant category of trucks and made up about 14% of the total trucks counted.



Conclusions

Diesel truck impacts are a serious health and environmental justice issue that needs to be addressed. CBE and community members want real reductions in the impacts of diesel trucks in East Oakland, including but not limited to:

- Retrofit all old, heavy-duty diesel trucks;
- Provide adequate services, including 24-hour refueling stations, bathrooms and parking outside of East Oakland so that truckers are not limited to coming to East Oakland;



- Re-route trucks to keep them out of residential areas as much as possible and create adequate signage throughout the community;
- Educate truckers about the California 5-minute idling law and then enforce it;
- Inventory and then regulate magnet sources;
- Evaluate diesel impacts in planning and provide health protections for current and new residents;
- Support urban agriculture and grow our food locally -- provide opportunities for local jobs instead of trucking food in.

Download the full report at:

<http://cbecal.org/campaigns/oakland.html>

Report cover design: Nia Imara, www.niamara.com

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Bay Area Truckers: Don't Sit Idle

Turn off your engines and save money on fuel and help the communities breathe cleaner air! The California idling law says:

- It is illegal for any diesel-fueled truck over 10,000 lbs. to idle its primary engine for more than 5 minutes
- Big rigs with sleeper cabs may only use auxiliary power systems when they are more than 100 ft. from residential areas
- School buses must turn off engine upon arrival
- When not waiting for passengers to board, it is illegal for transit buses to idle for more than 5 minutes. When waiting for passengers to board, buses may idle for no more than 10 minutes. If passengers are on-board, buses have no idling limit.
- Port terminals may not keep truckers waiting longer than 30 minutes

Violators face a \$300–\$1,000 fine or criminal charges.

Report Violators:

- **Call Bay Area Air District: 1-800-EXHAUST**
- **Call Air Resources Board: 1-800-END-SMOG**
- **Go online:**
<http://www.arb.ca.gov/enf/complaints/complaints.htm>

¹ "Reducing Air Emissions Associated with Goods Movement: Working Towards Environmental Justice." September 2009. National Environmental Justice Advisory Council, US EPA.

² Palaniappan, M; S Prakash, D Bailey. November 2006. Paying With Our Health: The Real Cost of Freight Transport in California. Pacific Institute. Available: http://www.pacinst.org/reports/freight_transport/PayingWithOurHealth_Web.pdf

³ Lin, J; S Prakash. August 2008. Taking a Toll: The High Cost of Health Environment & Worker Impacts of the Oakland Port Trucking System. East Bay Alliance for Sustainable Economy and Pacific Institute. Available: http://www.pacinst.org/reports/taking_a_toll/taking_a_toll.pdf

⁴ Lin, J; S Prakash. August 2008.

⁵ California Environmental Protection Agency, California Air resources Board and the Office of Environmental Health Hazard Assessment. April/ May 1998. *Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant.*

⁶ Lin, J; S Prakash. August 2008.

⁷ Lin, J; S Prakash. August 2008.

⁸ Palaniappan, M; S Prakash, D Bailey. November 2006.

⁹ Children's IQ Can Be Affected by Mother's Exposure to Urban Air Pollutants. Stephanie Berger. Columbia Univ. July, 2009

¹⁰ Alameda County Public Health Department. August 2008. Life and Death from Unnatural Causes: Health and Social Inequity in Alameda County. Available: http://www.acphd.org/AXBYCZ/Admin/DataReports/00_2008_full_report.pdf

¹¹ Roberts EM, English PB, Wong M, Wolff C, Valdez S, Van den Eeden SK, et al. Progress in pediatric asthma surveillance II: geospatial patterns of asthma in Alameda County, California. *Prev Chronic Dis.* July 2006. Available from: http://www.cdc.gov/pcd/issues/2006/jul/05_0187.htm

¹² Alameda County Public Health Department. August 2008.

¹³ Lee, A. September 2008. Cumulative Impacts in East Oakland: Findings from a community-based mapping study. Available: http://www.cbecal.org/pdf/cumulative_impacts_finalFULL.pdf

¹⁴ CBE conducted the diesel truck survey Monday through Thursday, from July 27 through August 6, October 26, 2009 and July 19 and 20, 2010. Each day except for July 19 and 20, surveyors counted trucks for about 4 hours during morning (9:30 – 1pm) shifts and afternoon (1pm – 5pm) shifts. Intersections with heavy traffic were counted for a total of two morning shifts and 2 afternoon shifts.



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