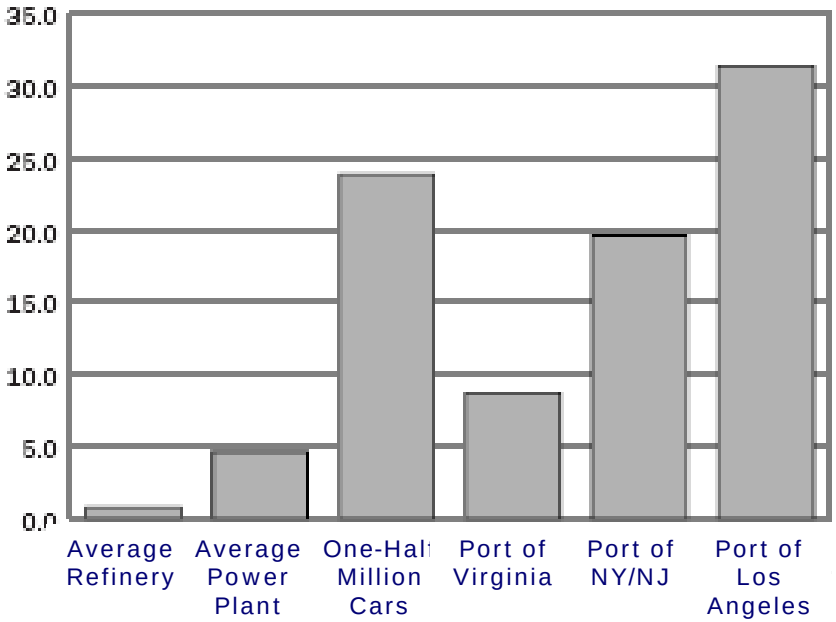
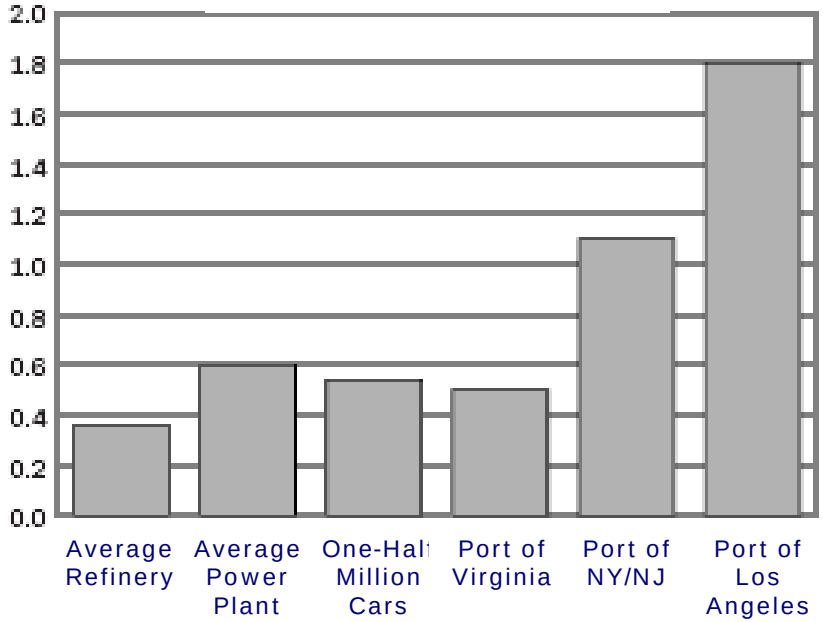
Pollution From Ports Compared to Other Sources

NOx Emissions
Tons per day



PM10 Emissions
Tons per day



Source: *Harboring Pollution*, NRDC 2004

CONTAINER PORTS VERSUS CARS

To place port pollution in context, during 2000, the 10 largest container ports combined polluted more than the following number of cars for these major pollutants:

More than **80 thousand cars** worth of CO
More than **182 thousand cars** worth of VOC
More than **3.2 million cars** worth of NO_x
More than **8.1 million cars** worth of PM_{10}
More than **18.5 million cars** worth of SO_x

In 2000, container vessels calling at the ten largest U.S. ports polluted the air with more sulfur dioxide than all of the cars in the states of New York, New Jersey, and Connecticut combined. Container-related heavy-truck traffic polluted the air with more NO_x within port terminal areas alone than the NO_x from each car in the state of Kansas. And passenger vehicle traffic in South Carolina polluted less particulate matter than all of the container-handling equipment at the ten largest ports.

Sources: Federal Highway Administration; EPA National Emission Trends 2000 Inventory; environmental impact reports and related emission inventories from Ports of Los Angeles, Long Beach, Houston, and Oakland; and Seaports of the Americas.

Source: *Harboring Pollution*, NRDC 2004

FIGURE 1-1

Average Contributions of Various Port-Related Sources to Total Nitrogen Oxides (NO_x) and Particulate Matter (PM_{10}) Emissions from a Container Port

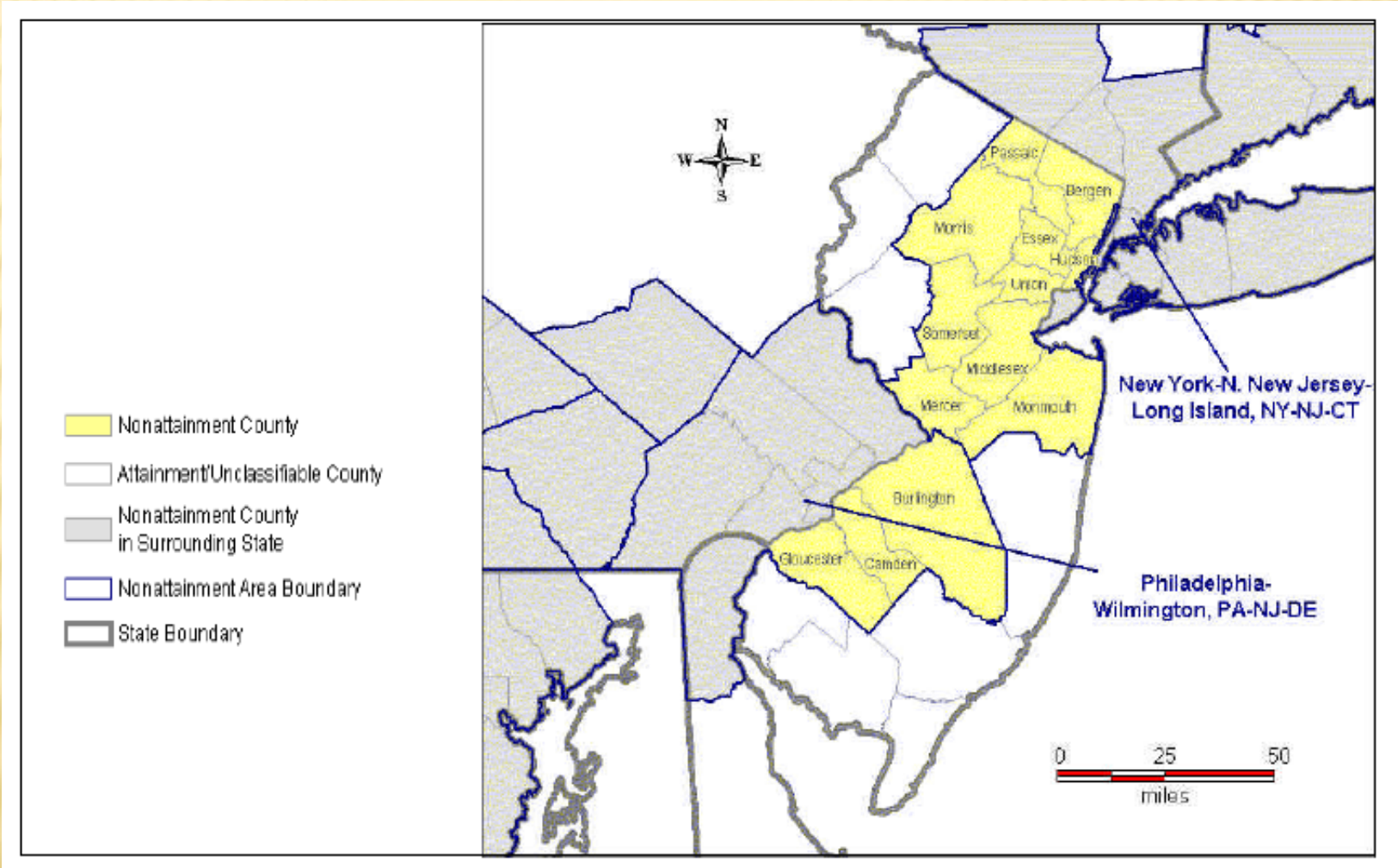
	Onsite Operational & Employee Vehicles	Trains	Cargo Handling Equipment	Heavy Trucks	Marine Vessels
% NO_x Emissions	1%	4%	23%	40%	32%
% PM_{10} Emissions	<1%	2%	24%	31%	43%

Source: *Harboring Pollution*, NRDC 2004

Diesel Soot Health Impacts Projected in New Jersey (1999)	
Health Impact	Annual Cases
Premature Deaths	880
Non-Fatal Heart Attacks	1,382
Asthma Attacks	17,926
Chronic Bronchitis Cases	535
Pediatric Emergency Room Visits	541
Acute Pediatric Bronchitis	1,290
Children With Lower & Upper Respiratory Symptoms	26,958
Lost Work Days	107,364
Minor Restricted Activity Days	620,975

Table 1: Clean Air Task Force (CATF) estimates based on 2005 United States Environmental Protection Agency (USEPA) methodology and 1999 USEPA diesel particulate levels. See www.cleanwateraction.org/njef/diesel.html for more county by county data.

COUNTIES IN NEW JERSEY VIOLATING FEDERAL HEALTH STANDARDS FOR PARTICULATE MATTER



source: EPA at http://www.epa.gov/pmdesignations/states/New_Jersey.htm

WHAT IS A HOTSPOT?

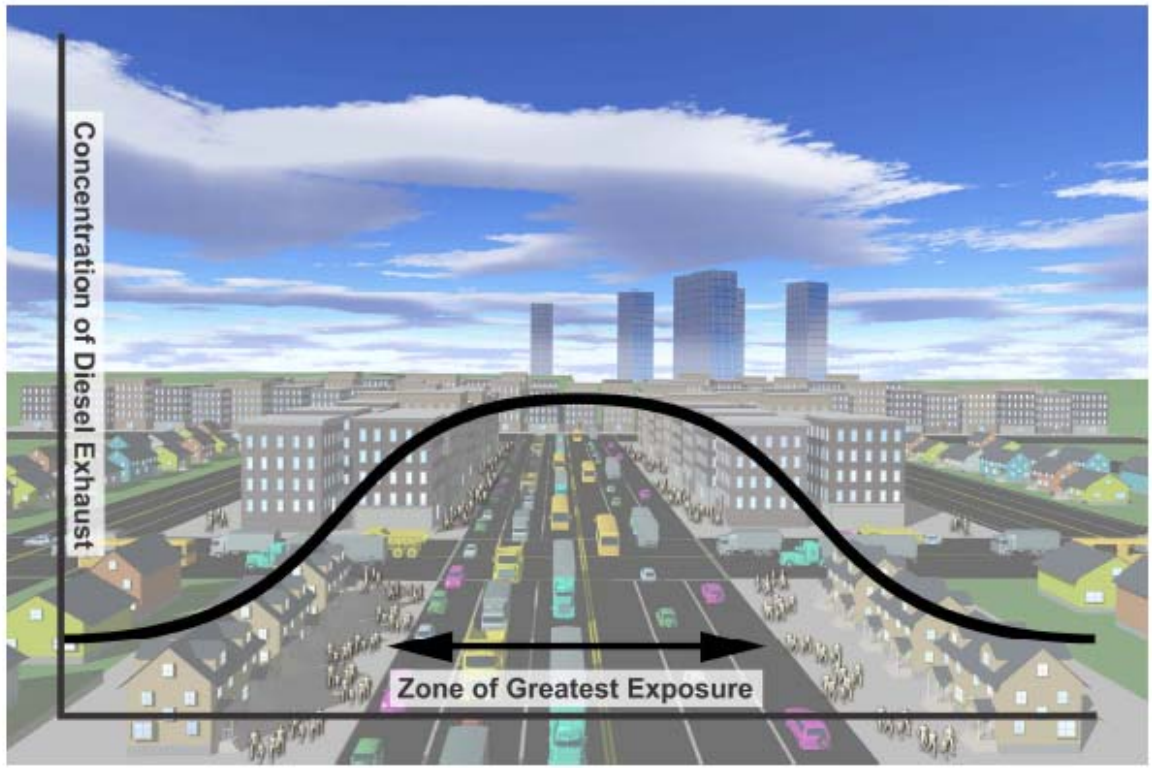


Figure 2: Diagram illustrates the impacts of traffic "hotspot". (Courtesy Clean Air Task Force, artist Alan Morin)

DIESEL HOT SPOTS: A Snapshot of Newark, New Jersey

FINDING A PATH TOWARDS
"KIDS CLEAN AIR ZONES"

New Jersey Environmental Federation
and Clean Water Fund

June 2006

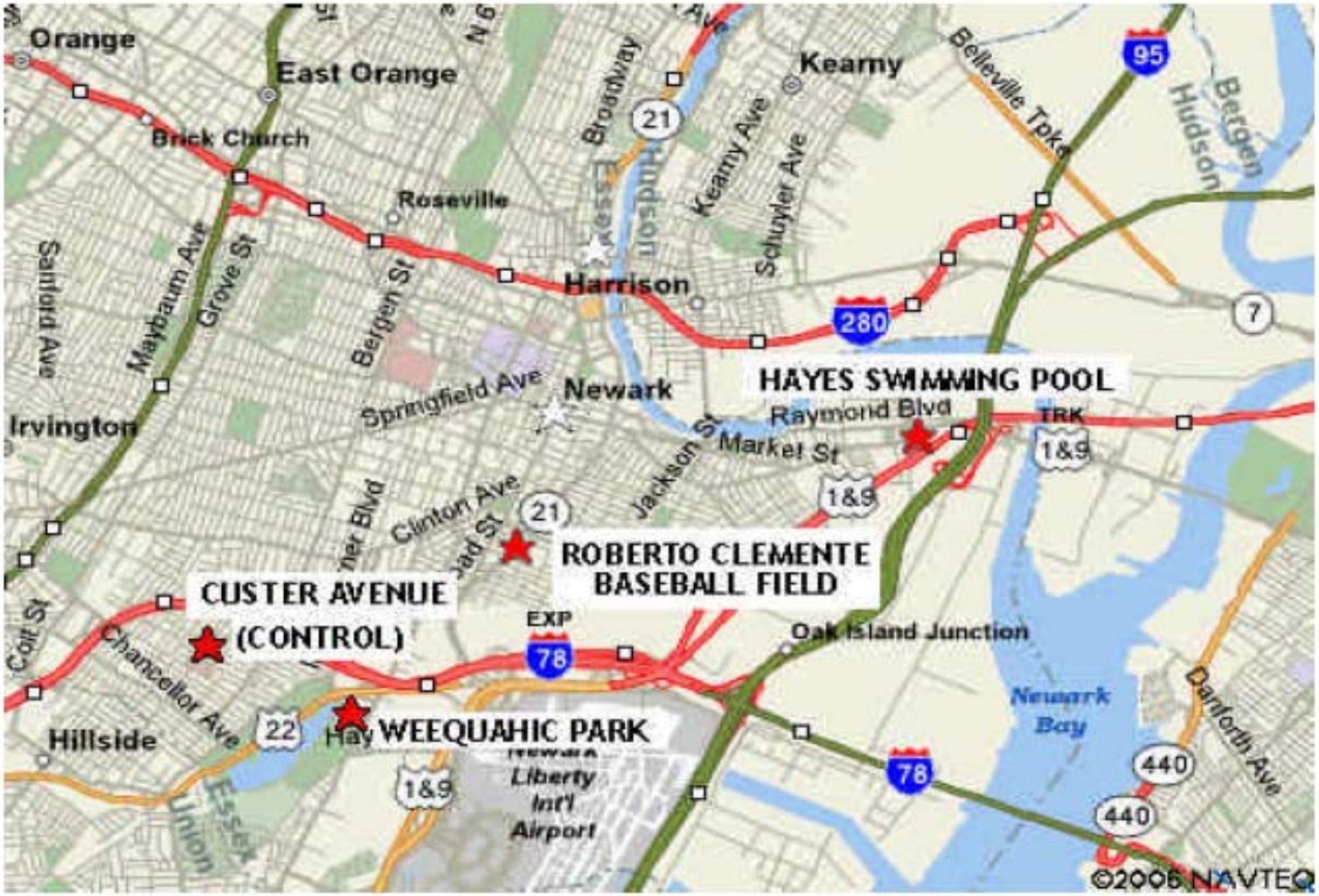


Figure 2: Map of recreational areas in Newark where particulate monitoring occurred.

The table and three charts below illustrate key results that document the impact of heavy-duty diesel trucks and buses on air quality, especially where the parks are bounded by major roads with heavy traffic.

	11:43 - 13:43, August 2, 2006				*8:45 - 11:45, August 3, 2006*				*13:45 - 14:45, August 3, 2006*			
	Ironbound Hayes Park Community Pool		Custer Ave (Control)		Roberto Clemente Ballfield		Custer Ave (Control)		Weequahic Park		Custer Ave (Control)	
	MAX	*AVG*	*MAX*	*AVG*	*MAX*	*AVG*	*MAX*	*AVG*	*MAX*	*AVG*	*MAX*	*AVG*
$PM_{2.5}$ (ug/m3)	85	27	21	17	584	64	33	22	67	25	27	25
Ultrafine particles / cc)	124,860	13,757	10,920	5,828	205,400	26,238	81,000	17,384	104,030	22,297	21,600	18,337
Black Carbon (ug/m3)	21.26	2.02	0.91	0.46	20.20	3.20	1.59	1.00	19.47	2.60	1.23	0.70

Table 1: A summary of data for all three park sites examined in the study, in comparison with synchronous data from the Custer Avenue residence or "control" location.

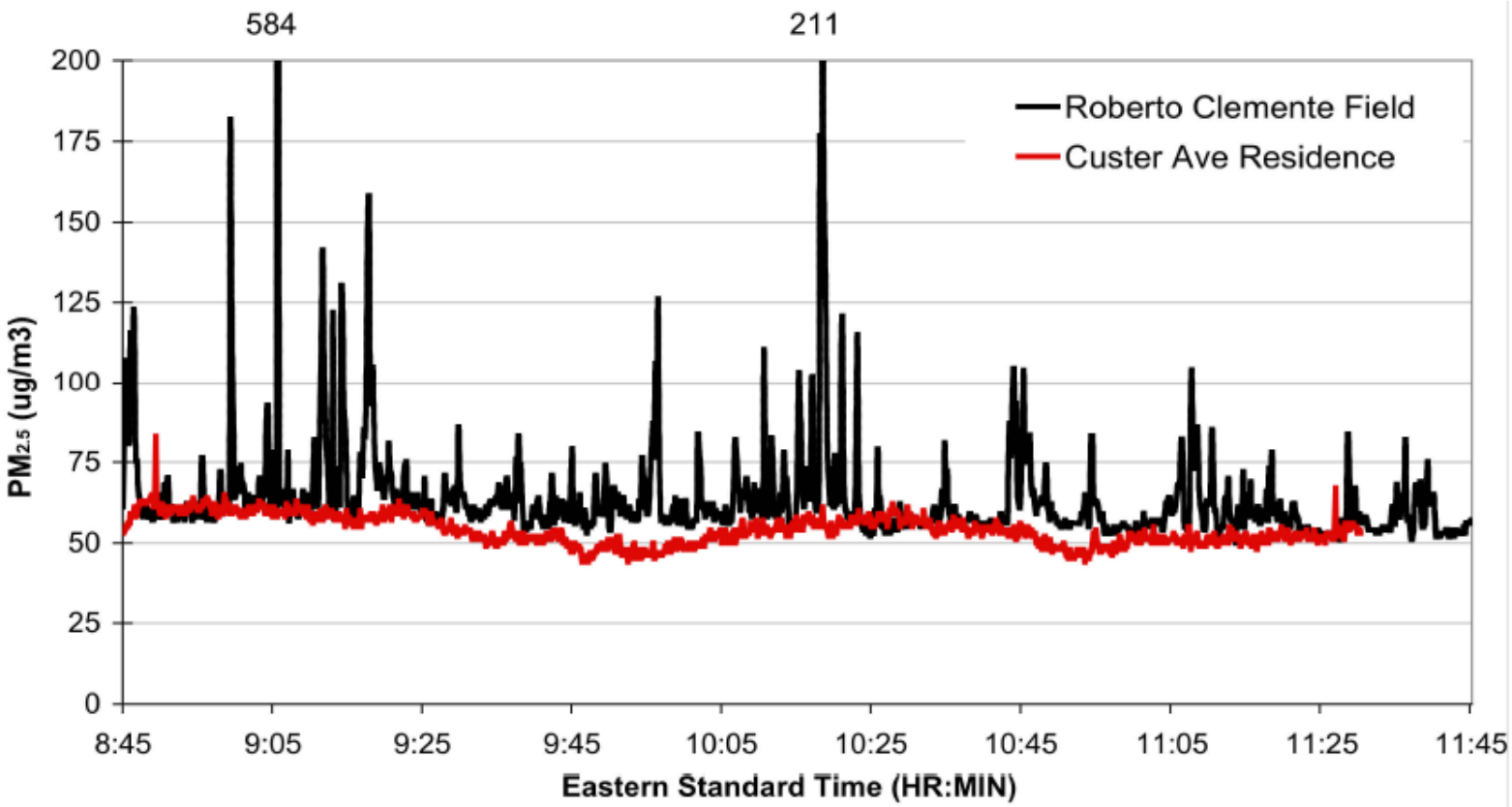


Chart 1: Truck traffic significantly elevates fine particle concentrations on the bleachers at Roberto Clemente Field, Newark (black) as compared to air quality conditions outside a Custer Avenue residence in Newark (red), located on a relatively quiet residential street.

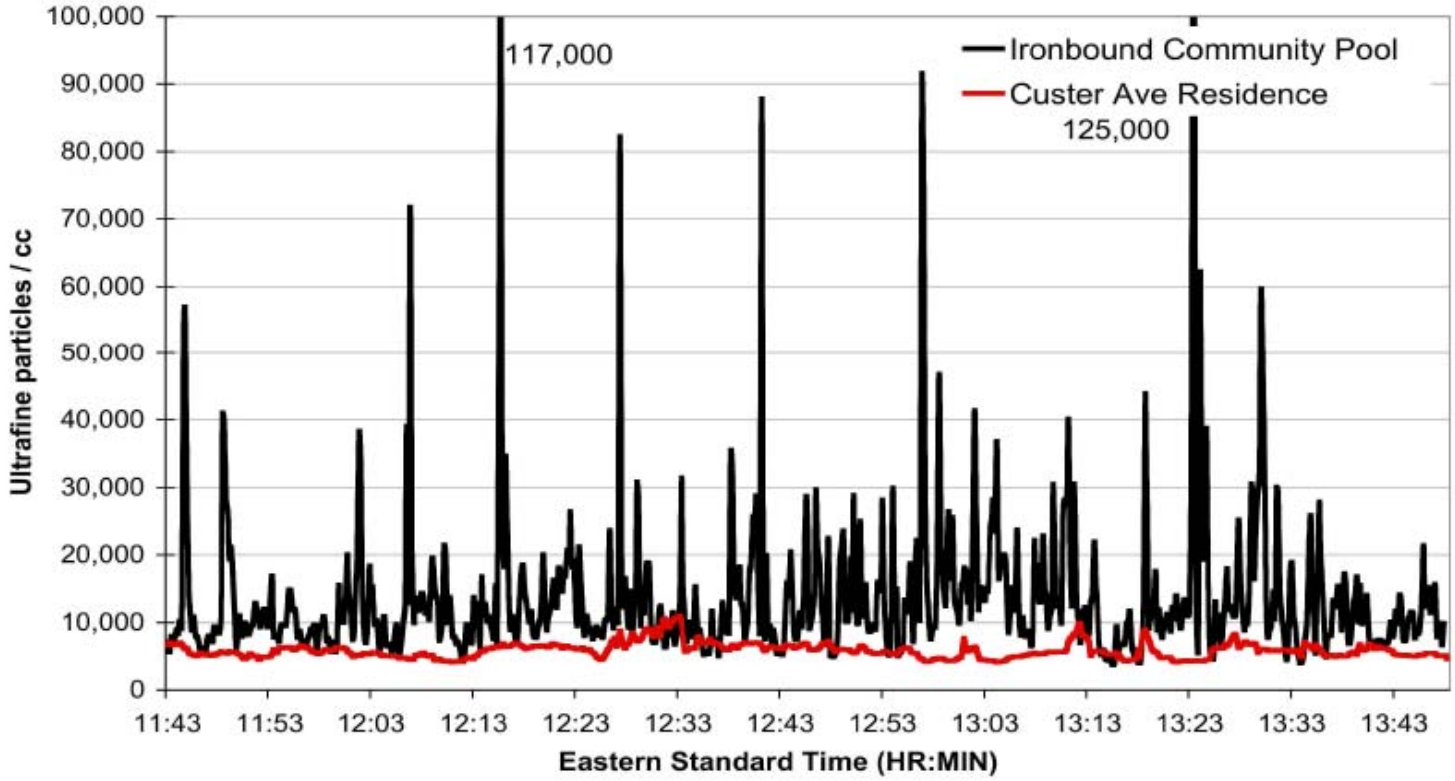


Chart 2: Ultrafine particles, an indicator of diesel exhaust outside Hayes Pool, Ironbound community (black) as compared with the Custer Avenue residence (red). Similarly to Chart 1, spikes in concentrations at Hayes pool are indicative of the impact of nearby truck traffic on the park.

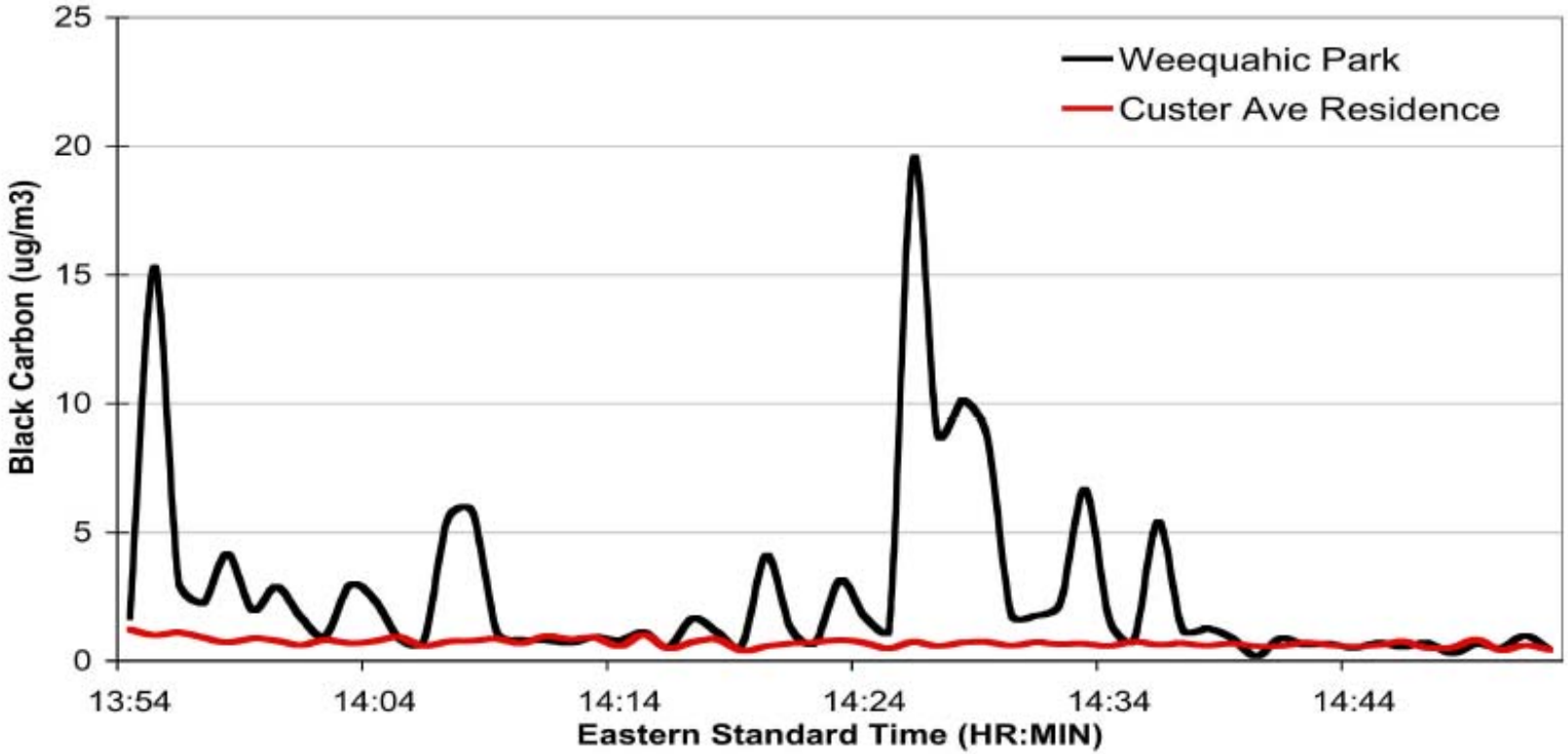
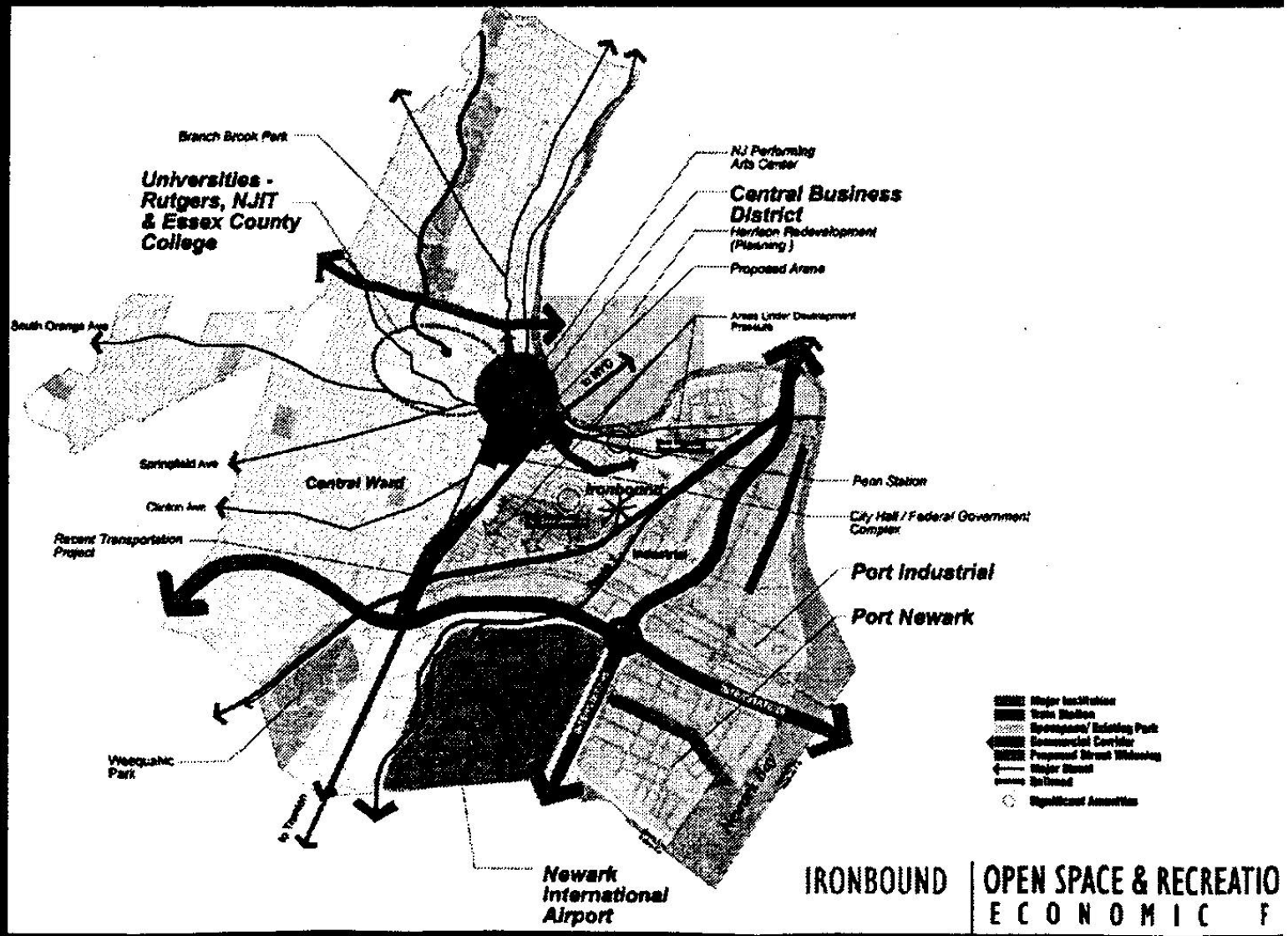


Chart 3: Elevated black carbon concentrations along Frelinghuysen Blvd at Weequahic Park as compared to the residence at Custer Avenue. Increases in black carbon were recorded as trucks rolled by the park and nearby neighborhood housing projects.

Economic Forces Influencing the Ironbound



INCINERATOR

CUMULATIVE AIR POLLUTION IMPACTS IN THE IRONBOUND COMMUNITY

- THE STATE'S LARGEST SOLID WASTE INCINERATOR, AND ONE OF THE LARGEST IN THE NORTHEAST IS LOCATED IN THE IRONBOUND:

  IT BURNS ABOUT 2800 TONS OF WASTE DAILY.

  EMITS HUNDREDS OF POUNDS OF TOXIC MERCURY AND DIOXIN INTO THE AIR.

  VIOLATES CLEAN AIR ACT.

- OVER 8 MILLION POUNDS OF TOXIC AIR EMISSIONS FROM FACILITIES

- AT LEAST 90 OF ITS 125 STREETS HAVE POLLUTION EMITTING FACILITIES AND OVER 200 STORE AND USE HAZARDOUS SUBSTANCES ON SITE

- APPROXIMATELY 10-15,000 TRUCKS EMANATE FROM PORT NEWARK/ELIZABETH

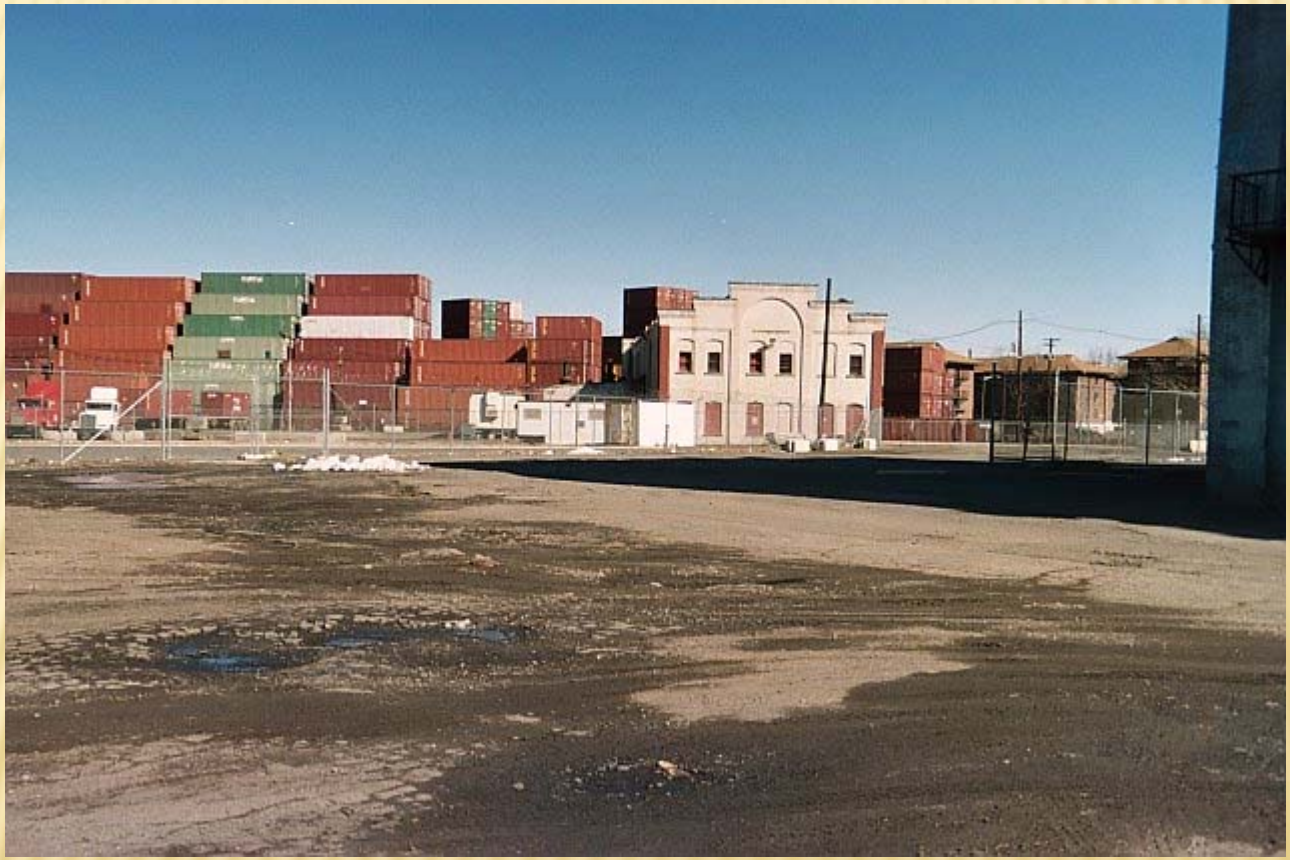
- OVER 45 MAJOR CHEMICAL AND MANUFACTURING PLANTS ARE CONCENTRATED IN AN INDUSTRIAL AREA LESS THAN HALF A MILE FROM PUBLIC HOUSING COMPLEXES

IRONBOUND POLLTUERS...ALL AMOUNTS OF POLLUTION ARE IN POUNDS

Company Name	Amount of Pollution
SUN CHEMICAL	70,000
REICHHOLD, INC.	48,337
MOTIVA TERMINAL	14,748
TROY CHEMICAL CORP.	12,100
CARDOLITE CORP.	10,850
CALPINE , L.L.C.	9,152
ADCO CHEMICAL CO.	4,315
GENERAL CHEMICAL CORP.	2,828
AMERADA HESS CORP.	2,075

AND THEIR LEGACY…

Company Name	"Legacy"
BALLANTINE BREWERY	Demolition causing pollution & isolation
Field B	Closed Oct. '07, high levels of lead dust from artificial turf
Tidewater Baling (former steel baling plant)	High levels of PAHs, PCBs, TPH
Hoest Celanese—Pool & Rec Center	Toxic levels of PCBs and other phenols
Diamond Alkali/Shamrock Superfund Site	World's largest concentration of dioxin. Made Agent Orange
Doremus Avenue—"Chemical Row"	New home of Essex . Site of spills & fires.
Passaic Valley Sewage Authority	One of largest wastewater facilities in , has 8 miles of access roads



"CONTAINER CITY"

- THE TERRELL HOUSING PROJECT IS A GRAVEYARD FOR EMPTY PORT CONTAINERS FROM OVERSEAS.
- CONTAINERS ARE STACKED 7 – 8 STORIES HIGH.
- THE CITY HOUSING AUTHORITY SIGNED A CONTRACT ALLOWING CONTAINERS TO BE STORED ON A FORMER-PLAYGROUND HERE.
- PROMISED FUNDING FOR A NEW RECREATION SPACE HASN'T MATERIALIZED.

Newark Children at Great Risk

- 1 out of every 10 NJ students in grades K-12 has asthma, resulting in ½ a million school days lost in one year alone.
- In contrast, 1 out of every 4 urban kids have asthma.

This is an environmental health injustice.

(source: NJDEP)

Essex County Asthma Related Death & Hospitalization Rates

~ An environmental health injustice ~

	Newark	Suburban/Rural Essex County
Death Rate (per 100,000)	**5.8**	**2.8**
Hospitalization Rate (per 100,000)	**110**	**46**

Source: UMDNJ

Estimated Annual Medical & Other Economic Costs Related to Diesel Exposure (PM2.5) in Essex County

Health Impact	Estimated Cost per Person or Day*	Number in Essex County**	Total Cost per Category***	Total Cost in the County****	County Cost Minus Premature Death*****
Premature Death	$5,500,000	94	$517,000,000		
Non Fatal Heart Attack* **	$82,222	130	$10,688,860		
Missed Work Days	$138	10,586	$1,460,868		
Asthma Attacks	$42	1,802	$75,684		
				$529,225,412	**$12,255,412**

* Based on estimate generated by the USEPA Region II for a Philadelphia report (8/24/04) which included the medical/other costs of diesel

** Based on county chart released by NJEF, CWF and CATF (February 2005) and based on USEPA methodology and most recent data (1999).

*** Average based over a range of ages and includes lost wages and medical expenses over a 5 year period.

**** Does not include children 's ER visits, chronic/acute bronchitis, lower/upper respiratory ailments & hospital emission related to respiratory & cardiovascular needs.

***** This number more accurately reflects the partial cost of diesel-related health impacts of those trying to get on with their daily lives.

THE TECHNOLOGY IS THERE TO DO BETTER

- Retrofits:

- Fleet Upgrades

One 2007 truck is equal to sixty 1997 or earlier trucks.

Since 1997, the U.S. Environmental Protection Agency has passed three major heavy duty diesel rules that impose stringent emissions controls requirements on newly manufactured highway and off-road vehicles. These new emissions standards begin to go into effect in 2007 and 2008 respectively, requiring tenfold decreases in particulate matter and NOx emissions (see table below.) In the meantime, however, the older diesels on the road today—including those manufactured between now and 2007-- "legacy diesels," will continue to pollute our air. Over seven million heavy duty legacy diesels are at work on our roads, in construction and industrial sites. Cleaning up these legacy vehicles is critical to reducing disease and death in America over the coming decade.

Year	NOx	$PM_{2.5}$
1984	10.7	0.60
1991	5.0	0.25
1998	4.0	0.10
2004	2.0	0.10
2007	0.2	0.01

Clean Air Task Force 2006

TOP 6 US SEAPORTS BASED ON TEN VOLUME:

1. Los Angles
2. Long Beach
3. New York/New Jersey
4. Oakland
5. Seattle
6. Tacoma

All of these ports – except New York/New Jersey – are considering policies to reduce diesel pollution from port trucks

THE PORT OF LOS ANGELES HAS LED THE WAY WITH THE CLEAN TRUCK PROGRAM

THE PORT OF LOS ANGELES
NEWS

FOR IMMEDIATE RELEASE

Contact: Gordon Smith
310-732-3568
gsmith@portla.org

LOS ANGELES HARBOR COMMISSION APPROVES LANDMARK CLEAN TRUCK PROGRAM

WILMINGTON, Calif. -- March 20, 2008 – The Los Angeles Harbor Commission today approved a landmark Clean Truck Program (CTP) designed to achieve long-term sustainability, accelerate the replacement of high-polluting trucks with cleaner trucks, and provide market incentives to encourage private investment and create a capitalized, asset-based short-haul trucking or "drayage" system at the nation's largest container port.

THE PORT OF LOS ANGELES DETERMINED:

- The trucking ("drayage") system that serves the Port negatively impacts Port operations and the community through substantial air pollution and a variety of other negative impacts.
- Studies by the South Coast Air Quality Management District (AQMD) and the California Air Resources Board (CARB) have concluded that the more than two million people who live near the ports of Los Angeles and Long Beach face greater health risks than those who live elsewhere in the region.
- CARB estimates that Southern Californians pay between $100 million and $590 million annually in health impact costs related to drayage truck pollution and will pay up to $10.1 billion between now and year 2025.

Port of Los Angeles
http://www.portoflosangeles.org/CAAP/CTP_O&B.pdf

The objectives of the Port of Los Angeles Clean Truck Program are to…

- Rapidly advance the improvement of air quality at the Port
- establish performance criteria for providers of drayage services that promote the Port's business objectives
- Ensure sufficient supply of drayage services and drivers that promote the Port's business objectives;
- Enhance Port security and safety; and
- Reduce negative impacts that port drayage inflicts on the local community.

Port of Los Angeles
http://www.portoflosangeles.org/CAAP/CTP_O&B.pdf

The Best Solution to Advance "Green Growth"

According to a drayage options analysis performed by The Boston Consulting Group (BCG)

The current drayage system imposes between $500 million and $1.7 billion of costs on the public each year through: operational inefficiencies (e.g impact on truckers and trucking companies of truck under-utilization, traffic congestion and lack of driver health/benefits); city/community costs (e.g. road maintenance, environmental damage, vehicle and driving safety and residential impacts from truck traffic and parking); and, above all, public health (premature death, hospital admissions, workday and school-day loss, and restricted activity).

Port of Los Angeles
http://www.portoflosangeles.org/CAAP/CTP_O&B.pdf

A clean and sustainable drayage fleet, coupled with the dozens of other pollution reduction measures outlined in the San Pedro Bay Clean Air Action Plan (CAAP), provide a “green growth” strategy for moving projects forward successfully, increasing port capacity to accommodate future cargo volumes, significantly reducing port related air emissions in the decades ahead, and creating nearly 72,000 permanent jobs upon full build-out of a cleaner, modernized Port.

Port of Los Angeles
http://www.portoflosangeles.org/CAAP/CTP_O&B.pdf

Objectives for the CTP : Environmental, Port Operations, and Safety/Security

Environmental

- Reduce emissions from drayage (port trucking) to comply with CAAP guidelines
- By 2011, CAAP requires an aggregate reduction in pollutants from all Port sources including trucks
  - 47% DPM
  - 45% NOx
  - 52% SOx
- Enable continued migration towards newer and cleaner technologies over time

Port operations

- Improve stability of the port trucking market
  - Establish stable drayage service business
  - Avoid service disruptions during implementation
- Ensure long term sustainability
  - Truck fleet and market participants
  - Incomes that attract and retain drivers
- Enable green growth
  - Improve trucking operational efficiency and reliability

Safety and security

- Ensure compliance with safety standards
  - Vehicle safety
  - Driver
- Ensure that port security objectives are met

Source: CTP / CAAP presentations, 2006 CAAP Overview

STAFF RECOMMENDS CONCESSION OPTION 3 FOR PORT OF LOS ANGELES

- Licensed Motor Carriers in good standing
- $2500 application fee + $100 per truck
- 5 year term, option for renewal
- Transition to 100% employees in 5 years
- Strict controls on operation, maintenance, training, safety and security with record keeping and monitoring by concession administrator.
- Compliance with TWIC, technology and efficiency improvements
- Off-street parking of trucks
- Insurance requirements
- Preference to hire drayage drivers, use of First Source Hiring Center
- Placards on Trucks with 1-(800)-phone No.

MORE PORT EFFICIENCY WILL SAVE LIVES AND MONEY

Cleaner trucks & less idling =

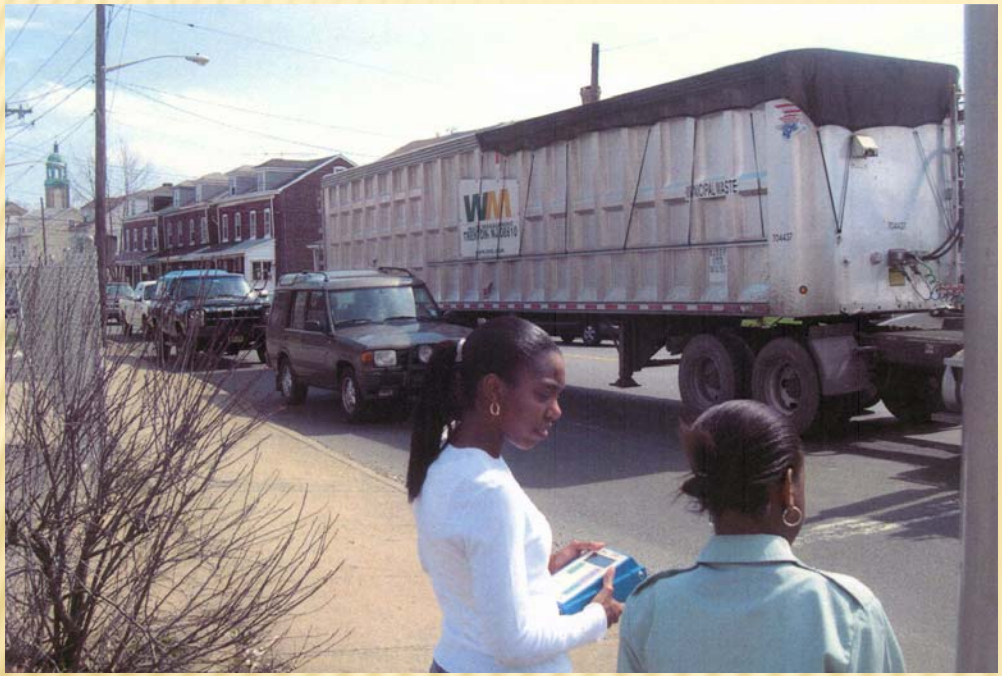
- less exposure to diesel exhaust
- less illness & lost work days
- lower fuel costs
- the end of industry subsidies by the public
- a decrease in climate change co-pollutants
- decreases in pre-mature deaths linked to diesel

PUBLIC & WORKER INVOLVEMENT

NEW STANDARDS & METHODS OF OPERATION SHOULD BE ADOPTED WITH WORKER AND RESIDENT INPUT.

STANDARDS COULD INCLUDE:

- REDUCTIONS IN TOXIC AIR CONTAMINANTS LINKED TO PORT-RELATED MOBILE SOURCES;
- THE CREATION OF DOCKING STATIONS FOR TRUCKS;
- ENFORCEMENT OF STATE LAWS, INCLUDING IDLING;
- CREATE NEW EMPLOYMENT STANDARDS IN WHICH THE PORT COMPANIES TAKE RESPONSIBILITY FOR THE TRUCKERS;
- INDEPENDENT AIR MONITORING & HEALTH ASSESSMENTS SHOULD BE DONE TO HELP DETERMINE THE EFFECTIVENESS OF THE NEW STANDARDS AND OPERATIONS.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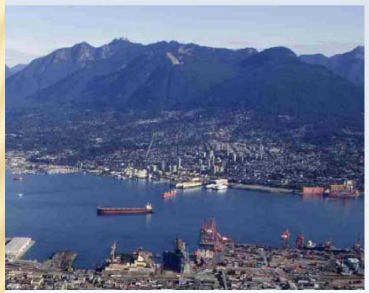
OTHER HARBOR COMMISSIONS AND PORT AUTHORITIES AROUND THE NATION ARE STANDING UP FOR COMMUNITIES BY REGULATING DIESEL EMISSIONS CREATED BY GOODS MOVEMENT



Northwest Ports
Clean Air Strategy

Port of Seattle
Port of Tacoma
Vancouver Port Authority

December 2007

Port of Seattle

PORT of TACOMA U.S.A.

PORT VANCOUVER

NJ DESERVES A CLEAN AIR PLAN:

- The Coalition for Healthy Ports urges the NJ Clean Air Council to advise the state to enact a Clean Air Action Plan for reducing the pollution at the port.
- We pledge to work with NJ CAC to implement solutions that allow the port to remain economically viable while ending the damage port commerce is causing neighboring communities.