

# Community, Environmental Justice Perspective on the IMO/ECA Standards

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Coalition for Healthy Ports  
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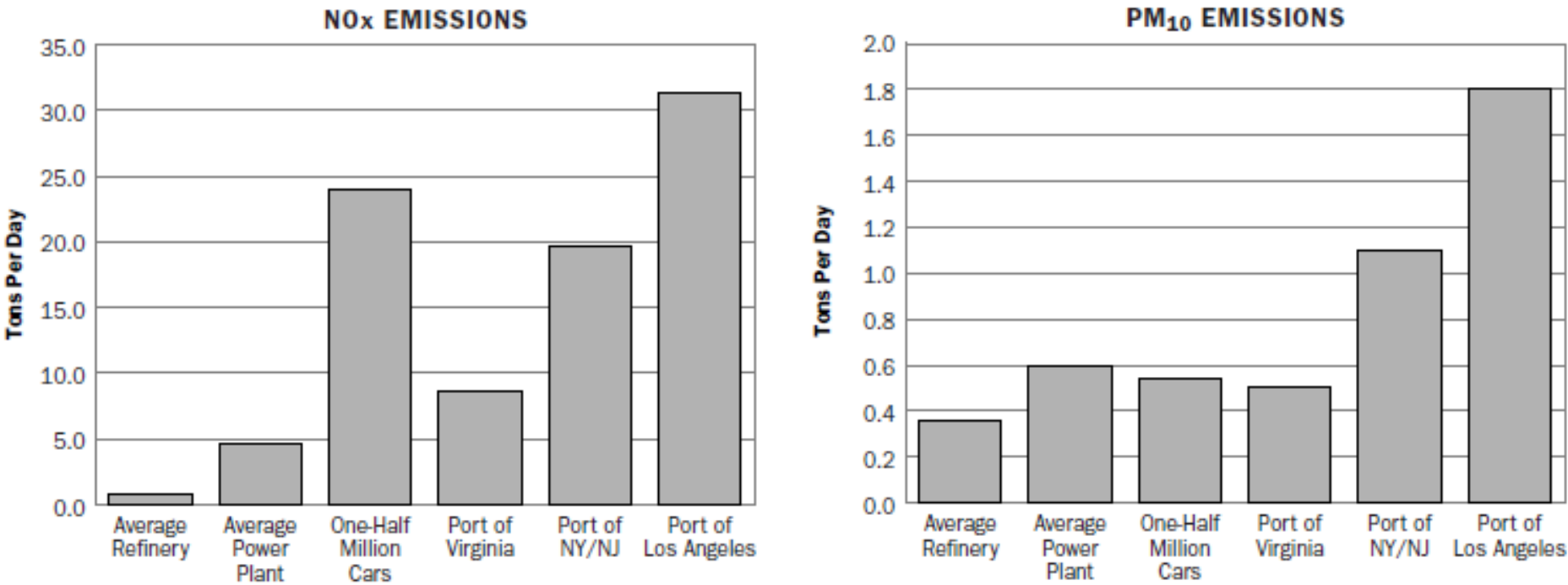
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- "In this area alone, more than 6.5 million people are exposed to elevated concentrations of diesel fuel emissions. This is an important and long overdue step to protect the air and water along our shores, and the health of the people in our coastal communities." (Administrator Jackson, 2009)
- The communities where the ports are located are disproportionately impacted by emissions from numerous sources, many of which are associated with the economic activities of the port. We, as a nation, must address this environmental justice issue. (Commissioner Jackson, 2008)

**FIGURE 2**  
**Nitrous Oxide (NO<sub>x</sub>) and Particulate Matter (PM<sub>10</sub>) Pollution from Ports Compared to Refineries, Power Plants, and Cars**



Sources:

- Emissions of NO<sub>x</sub> and PM, from combined port operations, out-pollute some of the largest sources of pollutants (Harboring Pollution, NRDC, 2004)

# Overview of Community Impacts

Ships are significant contributors to the U.S. and Canadian mobile-source emission inventories

In 2020, emissions from ships operating in the ECA are to be reduced below levels in 2020 absent the ECA annually by:

- 320,000 tons for NO<sub>x</sub> (23%)
- 90,000 tons for PM<sub>2.5</sub> (74%)
- 920,000 tons for Sox (86%)

Preventing 14,000 premature deaths and relieving respiratory symptoms for 5 million people/yr in the U.S. and Canada.

The monetized health-related benefits = \$110 billion in 2020.

# Health Benefits of Proposed Legislation

	<u>2020</u>	<u>2030</u>
Premature deaths	5,500 – 14,000	12,000-31,000
Hospitalizations (including ER visits)	---	20,000
ER Visits (only)	3,800	---
Heart attacks	20,000	---
Acute cases of respiratory symptoms	4,900	---
Children's asthma-related ER visits	7,000	
Cases of asthma symptoms in children	200,000	---
Cases of respiratory problems in children	---	370,000
Adult restricted activity days due to respiratory problems		9.6 million

# 2020 Potential ECA Ozone Reductions



**Ozone (Smog) reductions from the proposed ECA reach well into the U.S. interior**

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**Coastal areas will experience the largest improvements; however, significant improvements will extend hundreds of miles inland to reach non-attainment areas in states such as NV, TN and PA**



## 2020 Potential ECA PM<sub>2.5</sub> Reductions



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**Of the 45 ports EPA studied, at least 18 million people, including a disproportionate number of low-income households, African-Americans, and Hispanics, live in the vicinity of these facilities and are being exposed to annual average ambient DPM levels above levels found in areas further from ports.**



# Environmental Justice

## Implications of New Rule

- “The environmental, public health and quality-of-life impacts of goods movement on communities are more pronounced in areas with major transportation hubs. Minority and low-income communities near these hubs and throughways bear disproportionate impacts because of their close proximity to multiple pollution sources.” (NEJAC, 2009)
- “While the impacts from marine diesel emissions can affect all people, those facing the challenges of poverty, poor access to medical care, very low rates of insurance coverage, and virtual exclusion from public policy decisions that most impact them, are most likely to live and work near pollution sources such as ports, transportation corridors, freeways, and industrial centers. (American Lung Association, 2009)
- Diesel exhaust contains a highly complex mixture of carcinogenic compounds. Thus it is difficult to quantify the related cumulative health effects. It’s very likely that significant health benefits will accrue with reduced diesel emissions beyond what is measurable in current regulatory efforts. (American Lung Association, 2009)

# Environmental Justice

## Implications of New Rule

I've lived in West Oakland for 14 years, yet this was the first time I'd seen a ship come to harbor. When black smoke curled from the top of the ship, the thrill quickly faded. I knew what that black smoke does to the health of West Oakland residents.

*(Margaret Gordon, Paying With Our Health, 2006)*



I live in the Hispanic community of Wilmington in the shadow of the Ports of LA and Long Beach. When I wake up in the morning I do not smell the fresh clean ocean air or see beautiful blue skies that are only a distant childhood memory. Instead I smell tons of diesel exhaust from ships, cargo trains, and over 45,000 diesel trucks, and see a deadly brown smog cloud looming overhead .

*(Jesse N. Marquez, Paying With Our Health, 2006)*



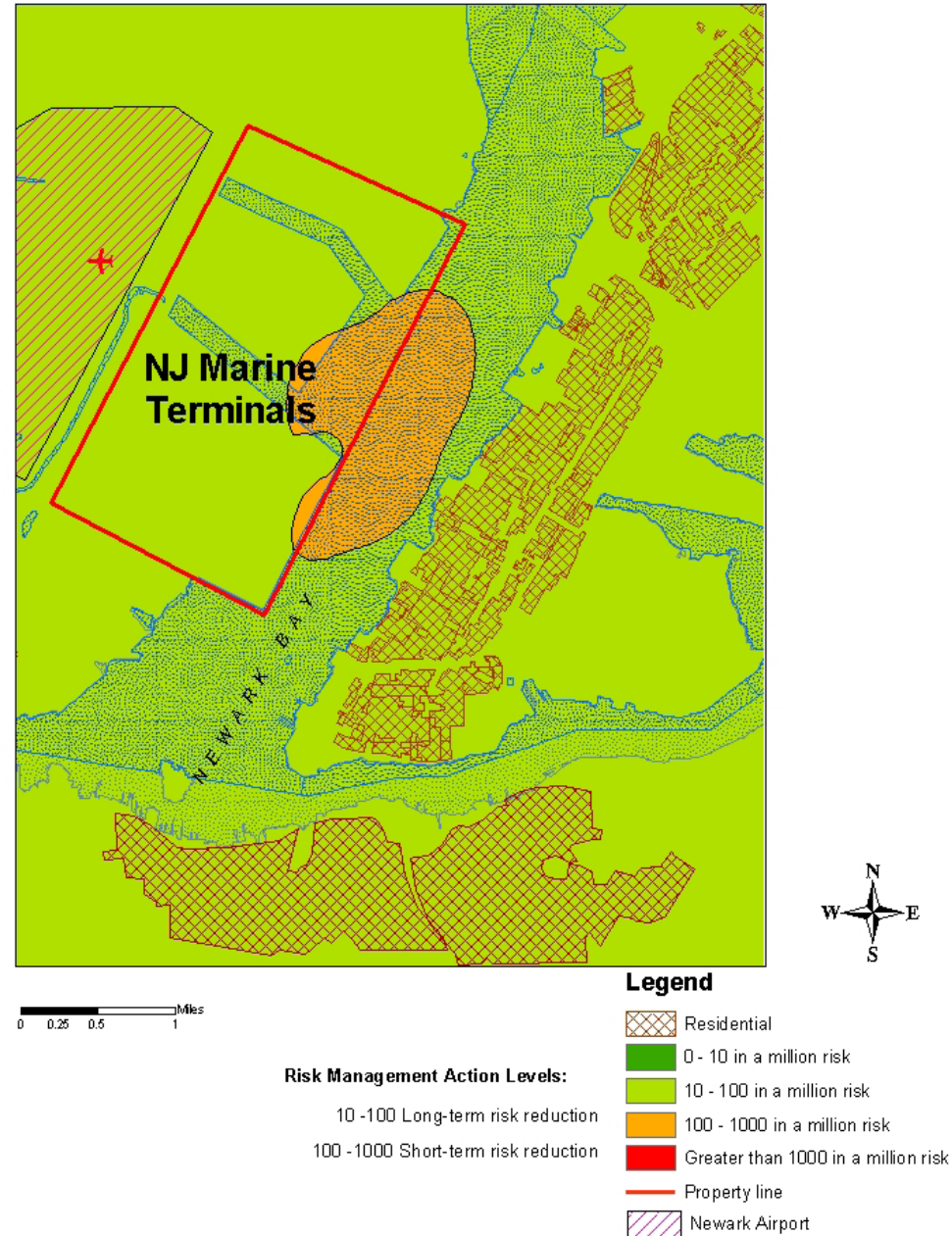
# Findings from NY/NJ

## PM2.5 and SO2 Emissions for Port Newark and Elizabeth (2006)

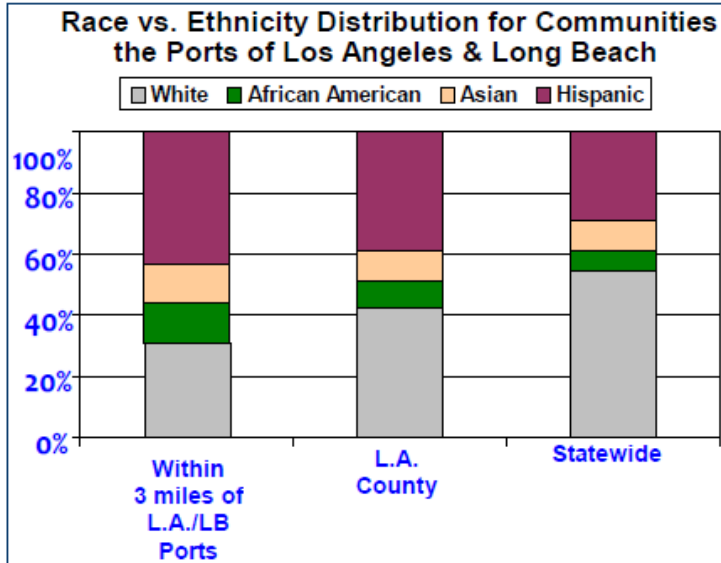
	PM2.5 (tpy)	SO2 (tpy)
Ocean-going Vessels (OGV-Dwelling)	49.4	1184.2
Ocean-going Vessels (OGV-Transit)	67.3	735.7

Emissions from Ocean Going Vessels, tugboats and cargo handling equipment (CHE), result in a cancer risk of between 10 and 100 in a million, justify long term efforts to further reduce cancer risk.(NJDEP, 2009)

**DRAFT**  
**FIGURE 9: MAXIMUM PREDICTED 70-YEAR LIFETIME CANCER RISK DUE TO DIESEL PARTICULATE EMISSIONS FROM OCEAN-GOING VESSELS (not including background)**



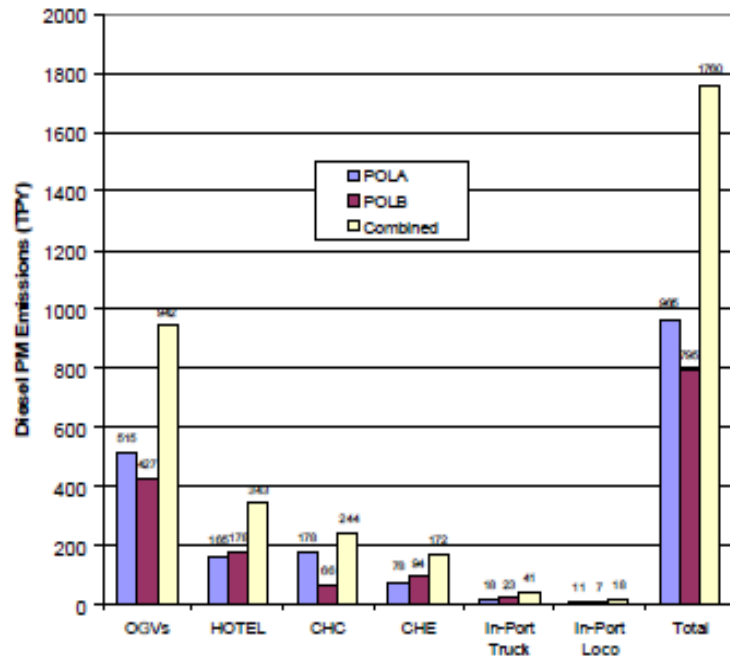
# Findings from CA



Communities closest to the ports in southern California have a higher percentage of minority residents

Diesel PM emissions from ship activities over the South Coast Air Basin area:

- Account for the largest percentage (73%) of emissions
- Result in elevated potential cancer risk levels exceeding 500 in a million



**Figure 3: Estimated 2002 Diesel PM Emissions for POLA and POLB**

Notes: OGV = Ocean-going Vessels; HOTEL = Ship Auxiliary Engine Hotelling; CHC = Commercial Harbor Craft; CHE = Cargo Handling Equipment; In-Port Loco = In-Port Locomotives

# Conclusions



- New rules will benefit EJ Communities
- More work still to be done to protect the most vulnerable and burdened communities
  - Implement some of California's Air Resources Board's recommendations for Ports (i.e. shore based power, vessel speed reduction, engine retrofits, etc. )
- All sectors that make up the goods movement industry need to take bold and comprehensive steps towards EJ

