Diesel exhaust particulates & vulnerable populations

Transitioning the Illinois Port District to a fully *zero-emissions* operation requires addressing diesel emissions

Diesel exhaust particulates (DEP) have lasting, negative effects on the body and disproportionately affect persons of color [1]

The Illinois International Port District moved

13.9 MILLION TONS

of cargo in Cook County*

*in 2017, from Illinois Marine Transportation Report 2021

Diesel Exhaust

- **Diesel engine exhaust is the most prevalent human-generated pollutant [1]**
- **Consists of solid, liquid, and gaseous components [1]**
- **Is listed as a carcinogen by the International Agency for Research on Cancer [2]**

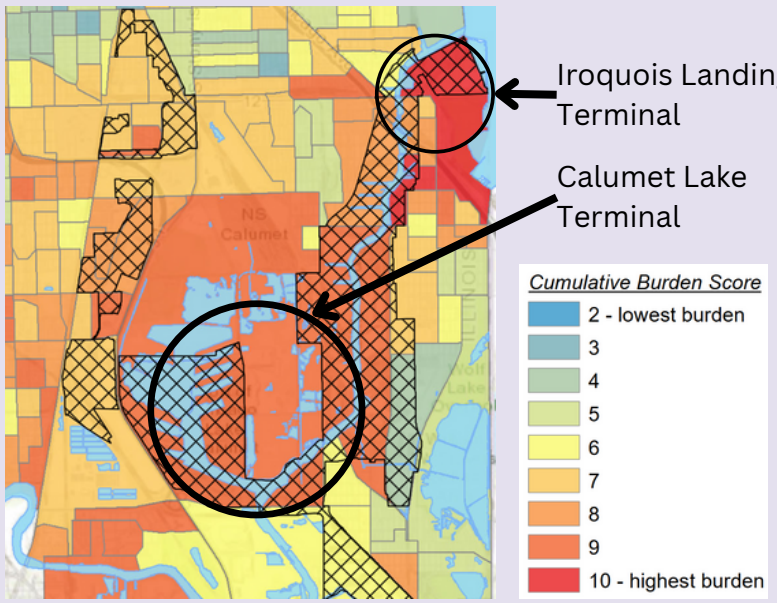
Health Impact

- **While the body can filter larger particulates, it cannot prevent ultra-fine and gaseous pollutants from deeply penetrating the respiratory system [1,6]**
- **In the inner respiratory tract, it may take weeks to months to remove particulates [1]**

Community Impact

- **Juvenile and elderly respiratory systems are most vulnerable to DEPs [6,10,11]**
- **Communities surrounding the Iroquois & Calumet landing terminal experience higher rates of exposure to diesel exhaust [16,17]**

City of Chicago: Cumulative Environmental Burden [20]



Studies show that DEPs are found to induce *pulmonary oxidative stress*. This is strongly associated with ***asthma, lung cancer,*** and ***chronic obstructive pulmonary disease (COPD)****[1,6,7]*

A cleaner port will improve the health of its workers and surrounding communities

Learn more at spot.northwestern.edu
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