



Clean Air Construction Policy

Taking local action
for health & cleaner air

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Background

Why Clean Diesel Contracting?

Policy Development Process

Policy Recommendations

Next Steps

Background

- 2006 Portland Air Toxic Assessment documented elevated health risks from diesel particulate matter
- 2006 to 2011 – \$2.3 Million in public fleet retrofits
- 2010 Piloted Clean Diesel Contracting policy
- 2016 Convened regional workgroup to develop a regional approach



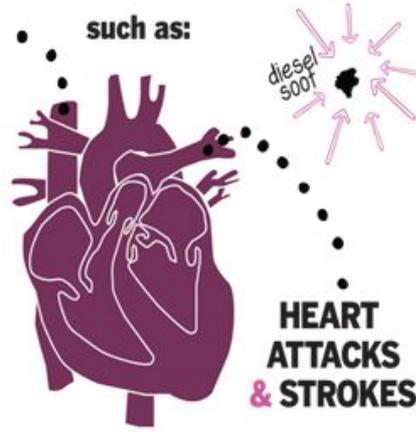
Multi-Agency Team



Why Diesel Exhaust?

Known human carcinogen -
International Agency for Research
on Cancer (IARC)

Diesel exhaust poses one
of the **highest health risks**
in the Portland airshed of
any toxic air contaminant
evaluated by DEQ



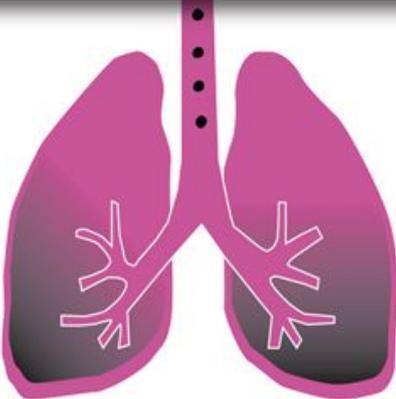
Diesel pollution causes up to 460 premature deaths in Oregon each year.

Children are the most vulnerable
to harm from these TOXICS,
contributing to low
birth rate AND
infant mortality.



This text block is set against a pink background. It features a silhouette of a crawling child. Above the text, there are several chemical structures representing various toxins, including a benzene ring, a sulfur atom, and a nitrogen atom.

These toxics can also lead to
INFERTILITY, LUNG DAMAGE, LUNG CANCER,
asthma attacks, allergies or infections.



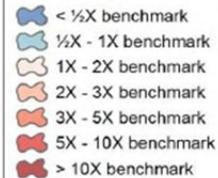
This text block is set against a pink background. It features a diagram of human lungs. The text 'These toxics can also lead to' is written in white, followed by 'INFERTILITY, LUNG DAMAGE, LUNG CANCER,' in bold, capital letters, and 'asthma attacks, allergies or infections.' in white. Above the text, there are several chemical structures representing various toxins, including a benzene ring, a sulfur atom, and a nitrogen atom.

PATS 2017 MODELING RESULTS DIESEL PARTICULATE MATTER ALL SOURCES

 PATS Study Area boundary

 Benchmark contour (0.1 $\mu\text{g}/\text{m}^3$)

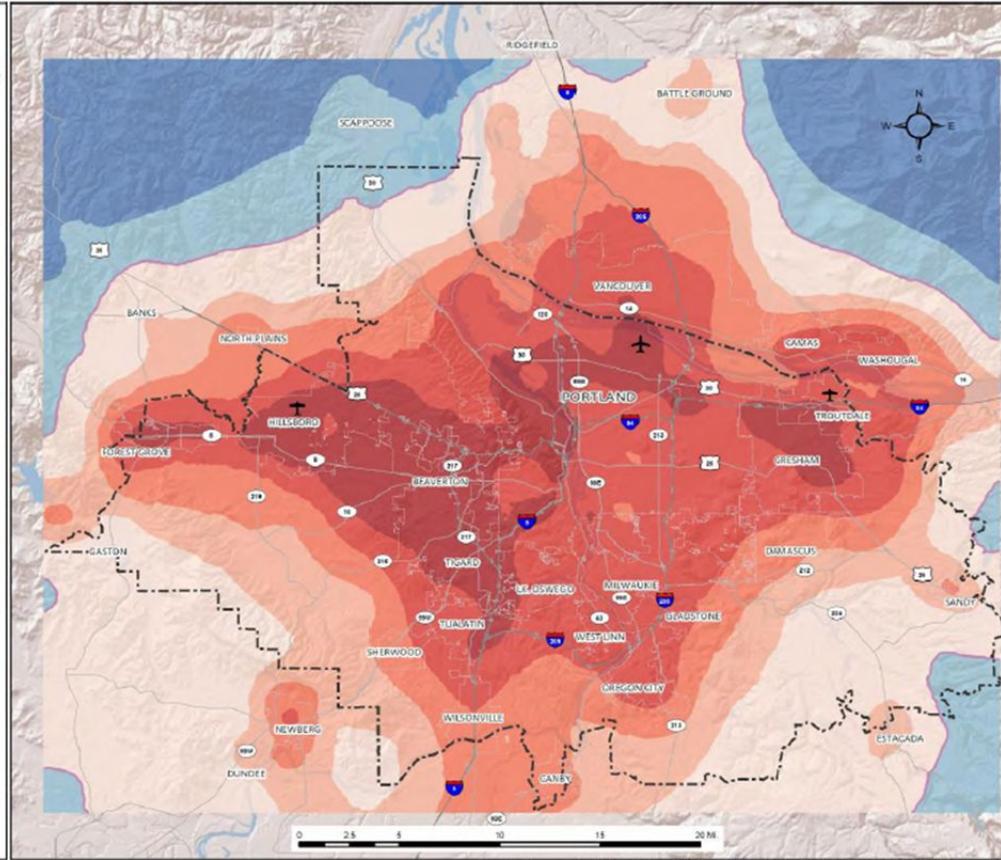
Annual average concentration



State of Oregon
Department of
Environmental
Quality

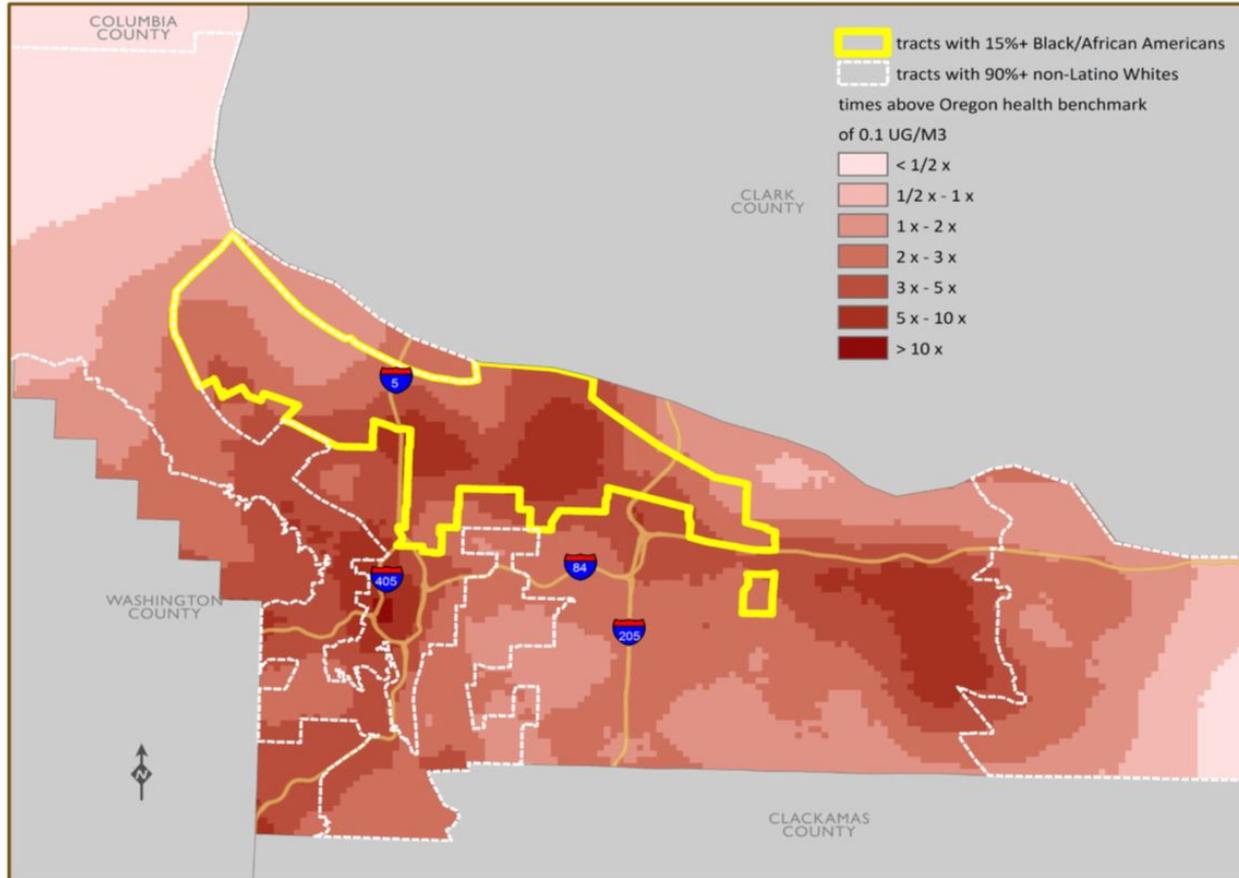
NOTE: Areas beyond the modeling domain (color-shaded region) are beyond the scope of this project.

REFERENCES:
Concentration data from DEQ Portland Air Toxics Study (PATS)
Base map from Metro and ESRI data.

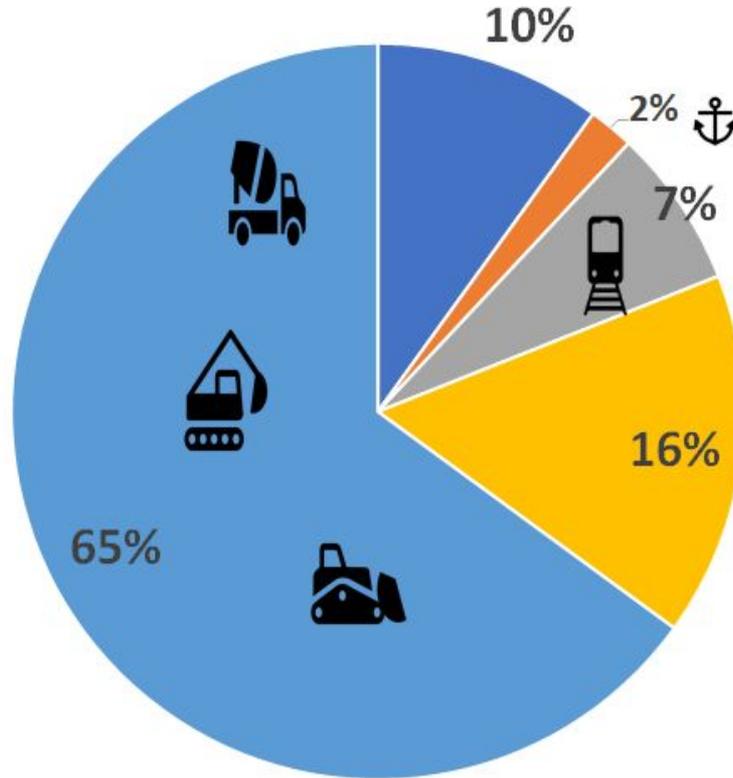


File: 1/13/2011 File: F:\Mapping\concentrations-diesel2017\2011_shapefiles\Maps\MxR_2011\1122\AF_2011_Diesel.Mxd

Environmental Justice – Health Impacts

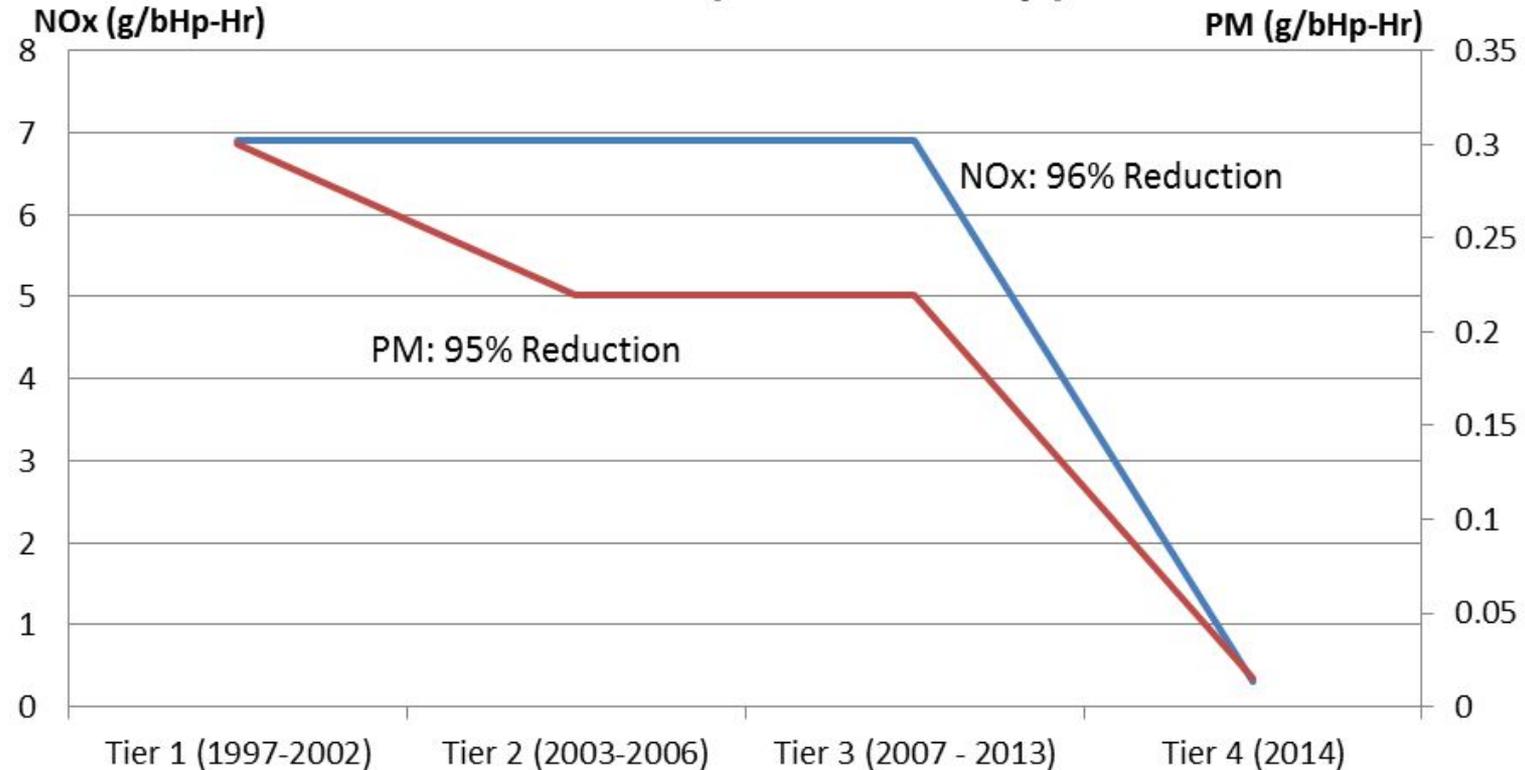


Why Focus on Construction Equipment?



Diesel emissions sources in Portland Metro area

Backhoe (100 - 175 hp)



1. Surveyed existing contracting programs
2. Identified key evaluation criteria
3. Evaluated program alternatives against criteria
4. Reported findings to internal and external stakeholders
5. Proposed policy recommendation

Next Step: Develop proposed contracting standard and supporting program with both internal and external stakeholders

Existing Clean Construction Contracting Policies (Partial List)



Regional Contracting Goal

1. **Cleanest available equipment**

- Non-road - EPA Tier 4 standards (including Tier 4i)
- On-road - 2007 model or newer dump trucks and cement mixes

OR

2. **EPA or CARB certified Best Available Control Technology (BACT) if available:**

- Diesel Particulate Filter (DPF), or
- Diesel Oxidation Catalyst (DOC) when adequately demonstrated a DPF is not suitable.

OR

3. **Alternative fuel vehicles or equipment**

Phased-in Approach

Schedule	Off-road	On-road
On effective date	No idling	No idling
After year 1	No tier 0 engines allowed*	
After year 2	No tier 1 engines allowed*	
After year 3	No tier 2 engines allowed*	
After year 4	No tier 3 engines allowed*	No pre-2007 engines*
After year 5	Tier 4 only*	
After year 6	Tier 4 only*	
After Year 7	Tier 4 only**	No pre-2007 engines**

*Older equipment allowed when retrofitted with BACT (DPF to DOC)

**Older equipment allowed only when retrofitted with DPF

Options for Accommodating Certain Businesses (Such as Disadvantaged, or Minority & Women-Owned Firms)

- Extend Compliance Deadline
- Offer Technical Assistance
- Fund retrofits for some firms
- Advocate for VW Settlement funds for DMW COBID Firms



Allow limited exemptions from the standard:

- If the equipment is not able to be retrofit
- If compliant rental equipment is not available
- If a filter will obscure the vision of the operator, or otherwise impact worker safety
- If the equipment is needed for an emergency
- If there are special circumstances or unique equipment that would result in a significant and demonstrable hardship for the contractor

Next Steps



- Dec 20th proposed standard and program back to Council
- Continue work with regional partners and stakeholders
- Identify funding resources to support DMWESB firms
- Identify needed resources for implementation



caac

clean air construction collabora