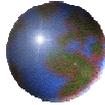


**Community Meeting
September 14, 2006
Oakland, California**



***Planned Studies to Estimate
the Health Risk from
Diesel Soot Pollution
in West Oakland***

Organized by:



1



1. Welcome and Introductions

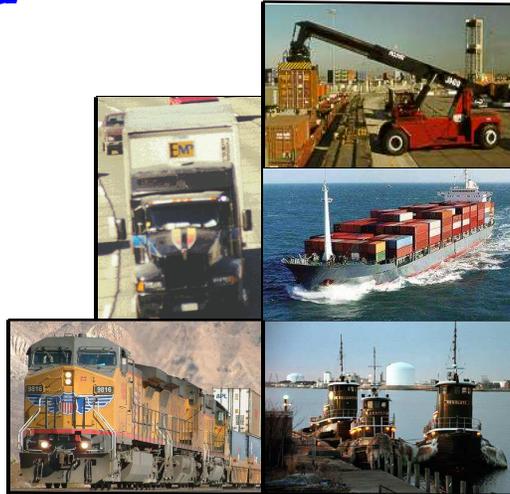
Jack Broadbent, Bay Area AQMD
Brian Beveridge/Margaret Gordon,
West Oakland EIP
Cynthia Marvin, ARB

2



High Concentration of Diesel Sources in West Oakland

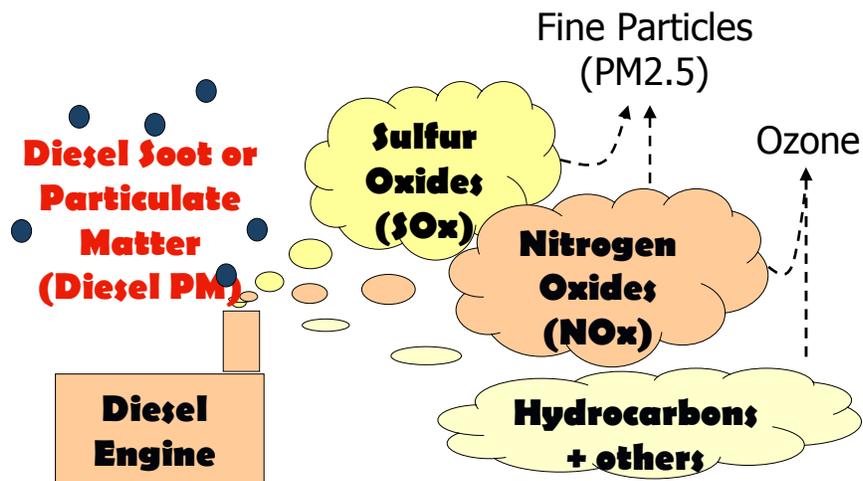
- ✚ Trucks
- ✚ Locomotives
- ✚ Ships
- ✚ Harbor craft
- ✚ Cargo handling equipment



3



Key Pollutants from Diesel Engines

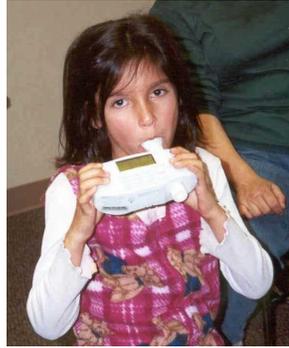


4



Health Impacts of Diesel PM

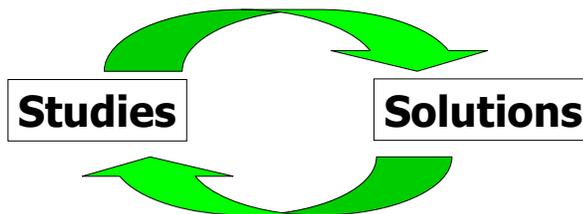
- ✚ Premature death
- ✚ Asthma and bronchitis
- ✚ Heart disease
- ✚ Increased risk of lung cancer



5

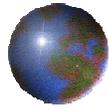


Reducing Diesel Emissions & Risk



Examples: Air Monitoring Plans
Risk Assessments Rules
Other Strategies
Community Actions

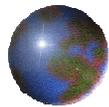
6



2. Community Views – Key Sources of Diesel Soot in West Oakland

Brian Beveridge, West Oakland EIP

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3. Risk Assessment Basics – Uses and Limitations

Dan Donohoue, ARB

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Risk Assessments

Do:

- ⊕ Estimate the lifetime cancer risk and other health impacts
 - For specific pollutants, facilities, and sources
 - For a specific year

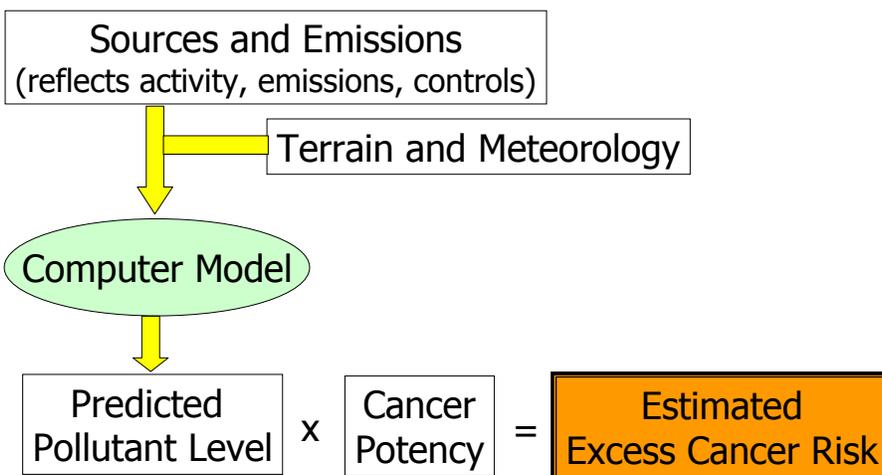
Don't:

- ⊕ Measure amount of diesel PM in the air
- ⊕ Gather/use health data on local residents

9



Cancer Risk: Key Inputs



10



Cancer Risk: Results

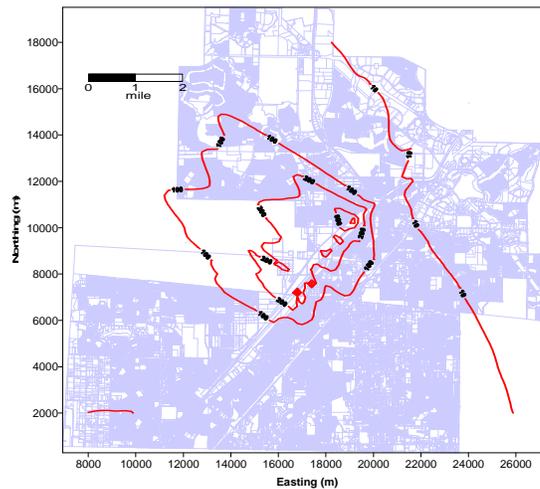
- ✦ Map of areas in each cancer risk range
- ✦ Number of people exposed in each range
- ✦ Example (*from Roseville Railyard study*):

<u>Lifetime Risk</u> (chances/million)	<u>People</u> <u>impacted</u>
100-500	20,000
10-100	150,000

11



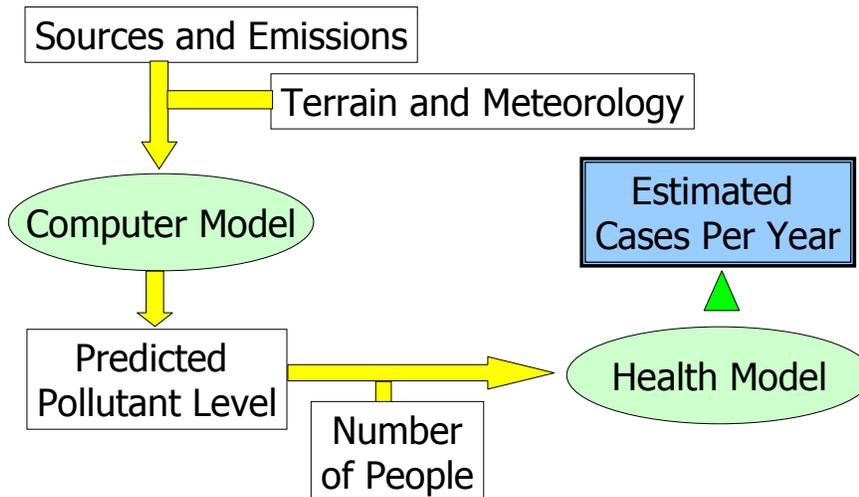
Cancer Risk: Example of Results Map



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Non-Cancer Effects: Key Inputs



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Non-Cancer Effects: Results

- ✦ For large study areas with high population, can estimate number of cases per year
- ✦ Quantifiable effects include: premature death, hospital admissions due to heart or lung disease, asthma or other lower respiratory symptoms, acute bronchitis, lost work and school days

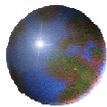
14



How can the results be used?

- ⊕ Compare relative risks
- ⊕ Prioritize actions to reduce emissions
- ⊕ Quantify existing community health risk
- ⊕ Project impacts of growth
- ⊕ Assess benefits of new controls
- ⊕ Support push for funding and federal actions

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4. Planned Diesel Risk Studies Focused on West Oakland

16



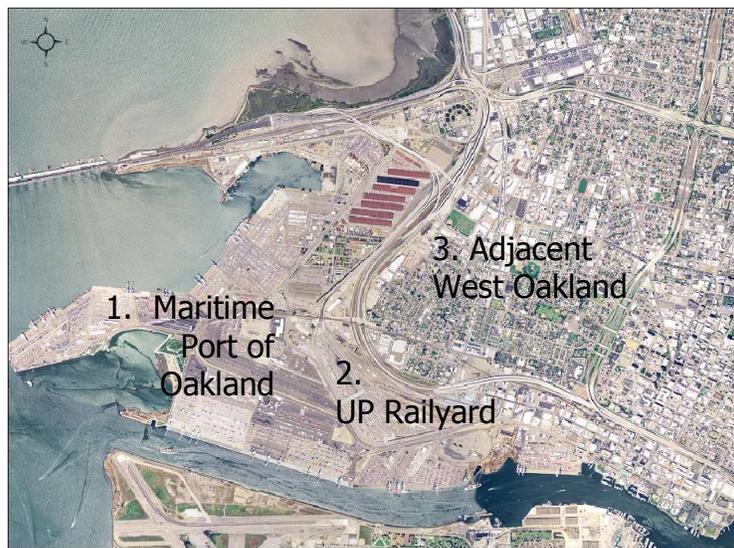
Overview

- ✦ Focus on diesel PM and goods movement
- ✦ Emissions in 2005
- ✦ 3 complementary studies
 - Part 1: Maritime Port of Oakland
 - Part 2: Union Pacific Railyard
 - Part 3: Adjacent West Oakland
- ✦ Results for each part, plus combined impact

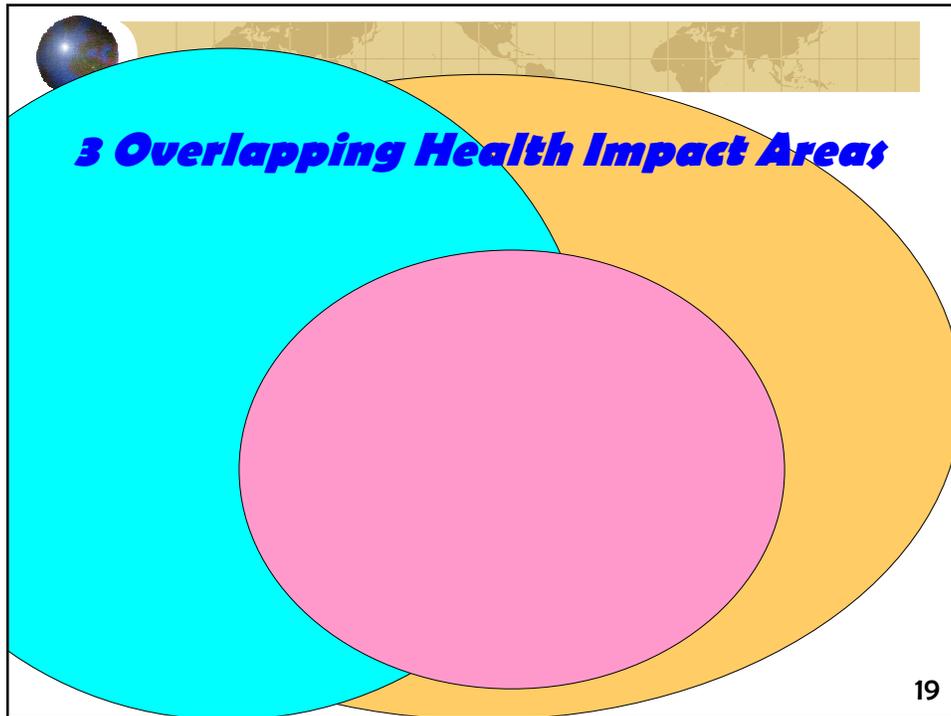
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3 Emission Source Areas



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-
- Overview (continued)**
- ✦ Joint technical effort by staff from ARB, Bay Area AQMD, Port of Oakland, and Union Pacific Railroad
 - ✦ ARB staff to develop risk impacts and prepare reports
 - ✦ All parties participate in community outreach on results
- 20



Part 1: Maritime Port of Oakland



Erik White, ARB

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Maritime Port of Oakland -- Basis

- Assess impacts of major Northern CA port as followup to Ports of LA/Long Beach study
- Identify relative risks from sources and operations (example, ships at dock versus trucks on port)
- Help highlight and prioritize need for emission reductions

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Maritime Port of Oakland -- Scope

- ✦ Ships and harbor craft that access the Maritime Port – operations at dock and out at least to Golden Gate Bridge
- ✦ Locomotives, trucks, cargo handling equipment, and other sources on Maritime Port property, including BNSF Railyard

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Part 2: Union Pacific Railyard



Harold Holmes, ARB

24



Union Pacific Railyard -- Basis

- 2005 Statewide Rail Yard Agreement
 - Limit non-essential idling to 60 minutes
 - Install anti-idling devices
 - Use ultra-low sulfur diesel fuel
 - Identify and repair smoking locomotives
 - Reduce locomotive diesel PM by 20% in and around rail yards
 - 16 new railyard risk assessments by 2008
 - Additional mitigation measures in the future

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Union Pacific Railyard -- Scope

- Locomotives, trucks, cargo handling equipment, stationary engines and other sources operating on UP Railyard property
- Locomotives and trucks operating off-site that directly service the UP Railyard

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Union Pacific Railyard - Community Involvement

- Public workshops on Draft ARB Railyard Health Risk Assessment Guidelines
- Community meetings to discuss draft findings after completing risk assessments
- Additional discussions on mitigation measures

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Part 3: Adjacent West Oakland



Dan Donohue, ARB

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Adjacent West Oakland -- Basis

- Required under 2005 Statewide Railyard Agreement
- Expanded to look at a broader area in West Oakland
- Help prioritize need for emission reductions

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Adjacent West Oakland – Scope

- Ships and harbor craft operating in SF Bay and Oakland Inner Harbor Channel that impact West Oakland and aren't included in Port risk assessment
- Trucks, locomotives, and other key sources operating within West Oakland study area that aren't in Port or Railyard assessment

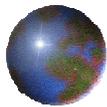
30



Study Products and Process

- ⊕ Release reports
 - Draft technical reports on results of each cancer risk assessment (3 total)
 - Summary report, including combined cancer and non-cancer health impacts
- ⊕ Hold community and technical meetings to discuss findings
- ⊕ Finalize reports

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5. Actions to Reduce the Health Risk from Diesel Pollution

Margaret Gordon, West Oakland EIP
Cynthia Marvin, ARB

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ARB Emission Reduction Plan for Ports and Goods Movement in CA

In April 2006, the Board:

- Adopted goals to reduce emissions & risk
- Directed staff to expeditiously pursue ARB rules/other actions in public process



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ARB Goals for Goods Movement

Reverse growth in emissions

- By 2010, reduce emissions as much as possible, at least to 2001 levels

Reduce diesel PM risk

- Rapid reduction in community risk
- By 2020, reduce statewide risk 85%

Attain all federal standards

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Recent ARB Rules & Programs

- ✓ Low sulfur fuel for most sources
- ✓ Truck idling limits
- ✓ Railyard risk reduction program
- ✓ Ban on cruise ship incineration near shore
- ✓ Marine auxiliary engine fuels
- ✓ Diesel cargo handling equipment
- ✓ Gas forklifts

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New ARB Rulemaking or Alternatives --- Public Process Underway

- ⊕ Port trucks
- ⊕ Privately-owned truck fleets
- ⊕ Shore power for ships and harbor craft
- ⊕ Incineration ban for other ships
- ⊕ Harbor craft fleets

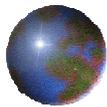
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New ARB Rulemaking or Alternatives --- Beginning Soon

- ✦ Low sulfur fuel for ship main engines
- ✦ Expanded ship speed reduction
- ✦ Switcher/yard locomotive upgrades
- ✦ “Green ship” construction and deployment to California service

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6. Next Steps/Closing Comments

Brian Beveridge, West Oakland EIP
Jack Broadbent, Bay Area AQMD

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