



# Addressing Air Quality Challenges in the South Coast AQMD

West Coast Collaborative  
San Francisco  
September 29, 2010

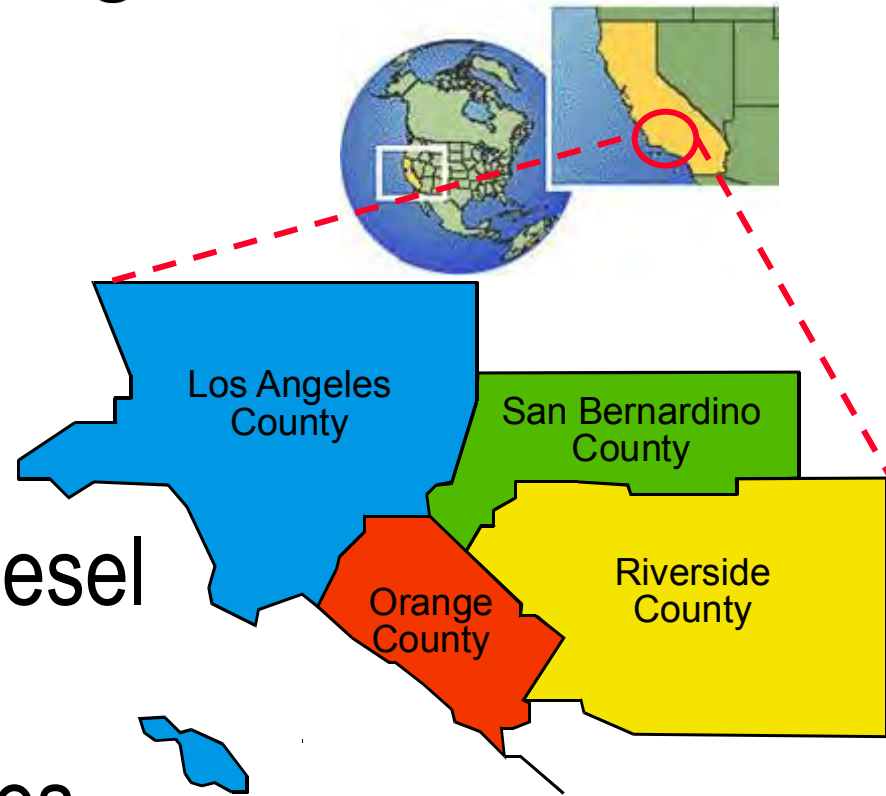


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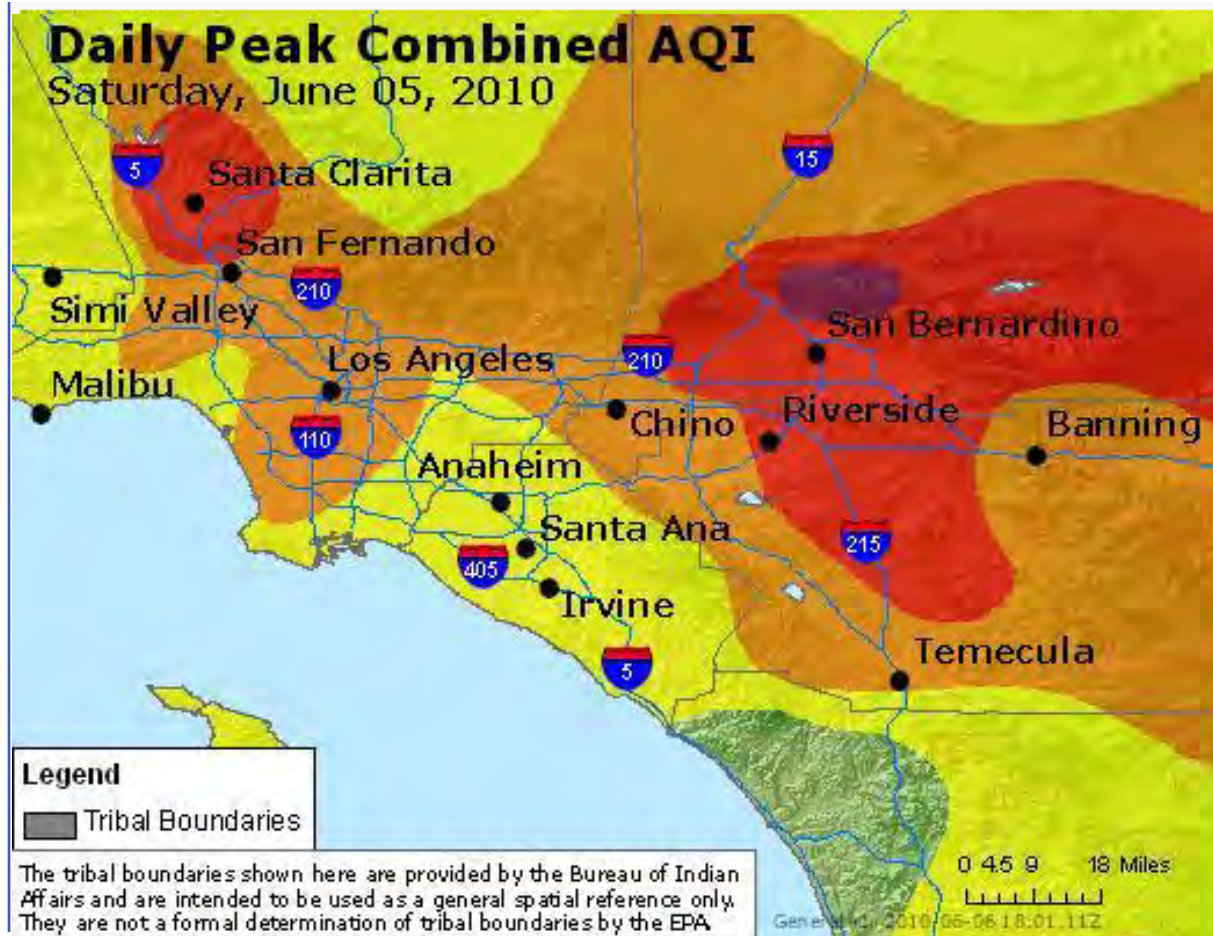
# AQMD Background

## South Coast Basin:

- 4-county region
- 11,000 sq. miles
- 16+ million residents
- Hundreds of thousands diesel vehicles
- Millions of gasoline vehicles
- Combined Ports of Long Beach and Los Angeles are nation's largest cargo gateway



# Air Quality is Worst in the Nation



Good

Moderate

USG

Unhealthy

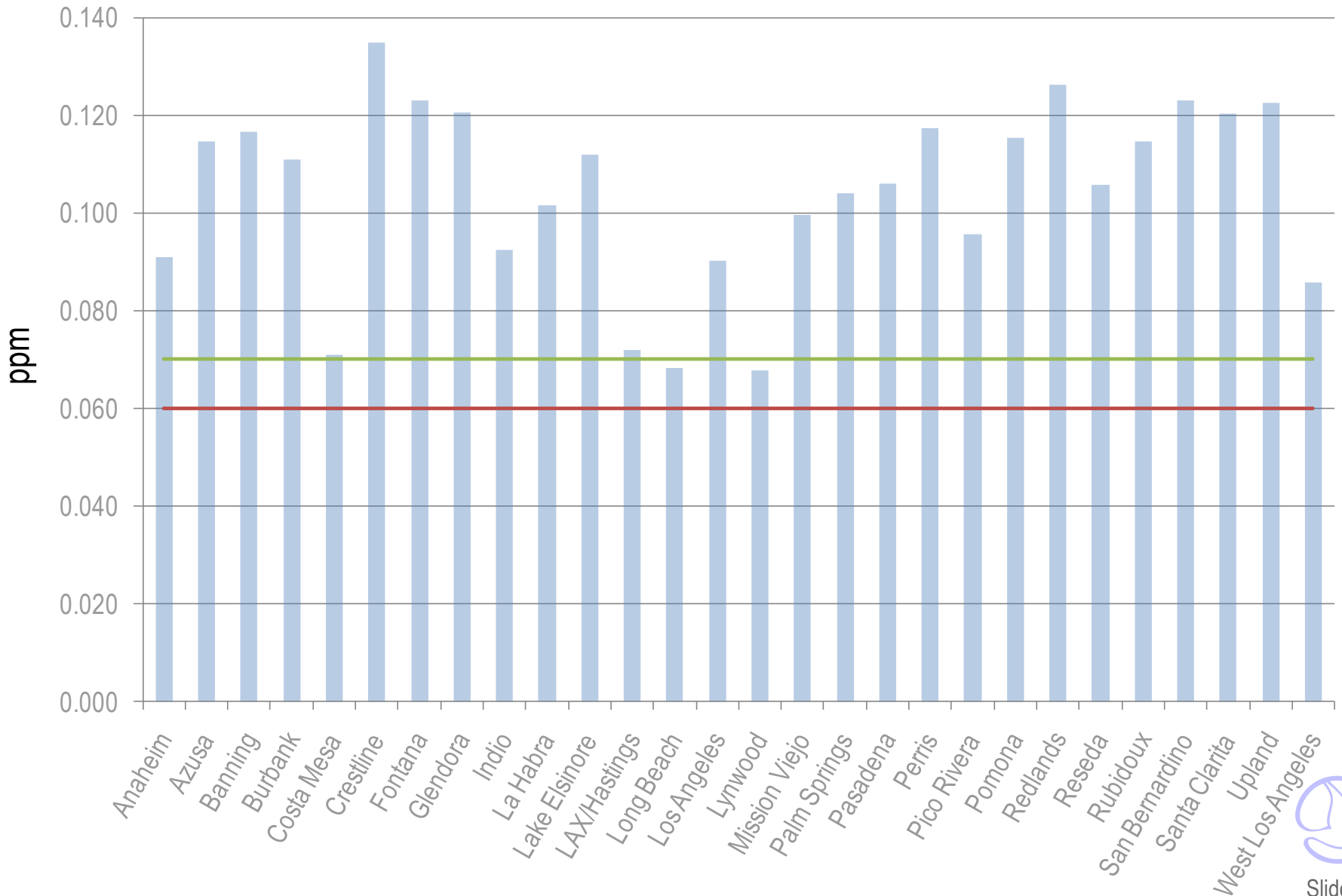
Very Unhealthy

Hazardous



# Recent Air Quality

Max 8-hr Ozone (2006-2008 3-year average)



# Most Polluted Cities

Los Angeles – Long Beach – Riverside

#1 in Ozone Pollution

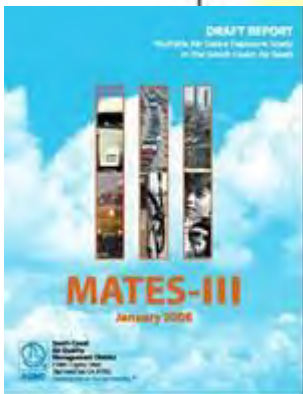
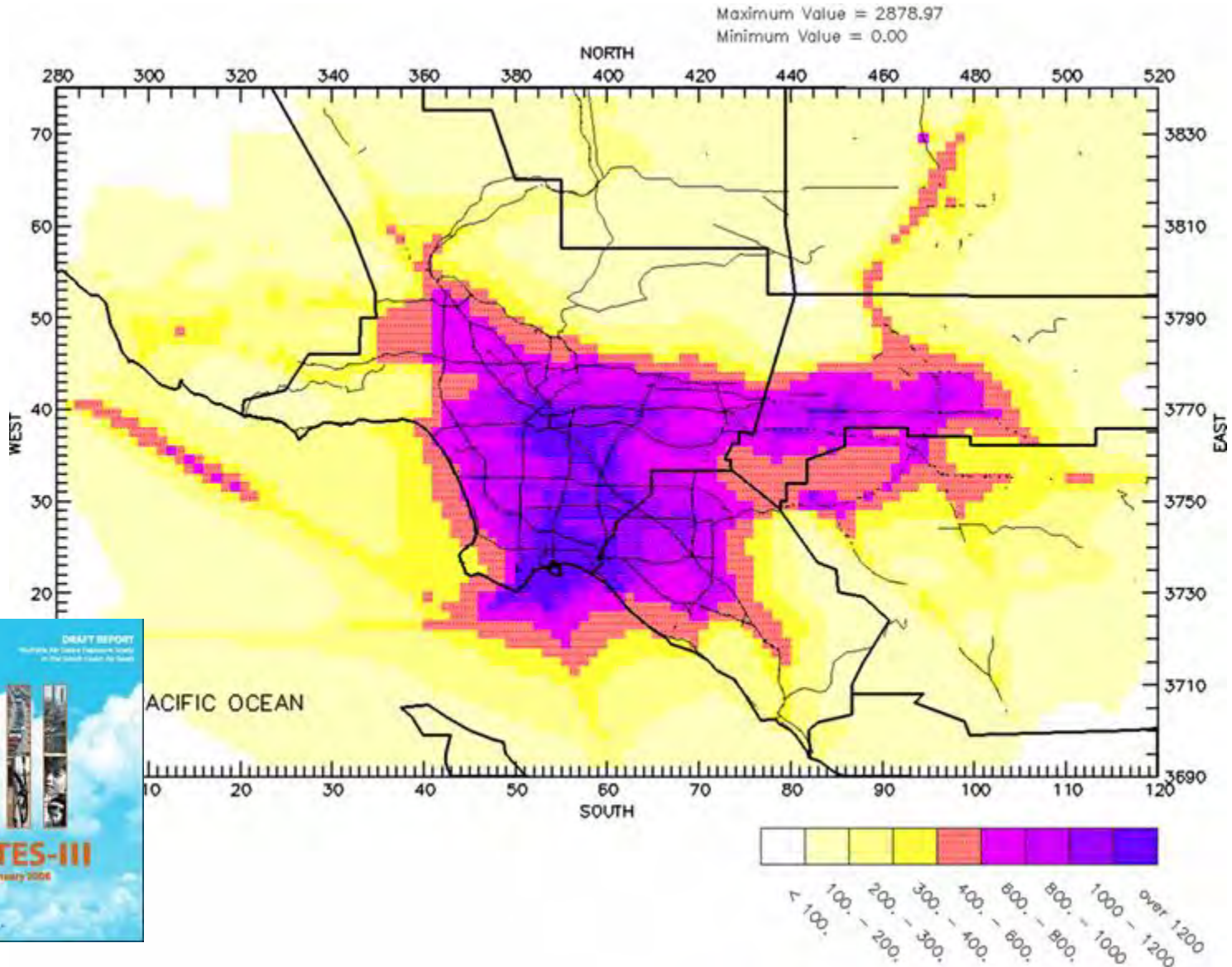
#3 in Year-round Particle Pollution

#4 in Short-term Particle Pollution

 **AMERICAN LUNG ASSOCIATION®**

**STATE**  
**OF THE AIR** 2010

# Estimated Cancer Risk



# Health Consequences

- >5,000 premature deaths / year
- 9,000 hospitalizations / year
- 1.7 million cases respiratory illness / year
- 1.3 million school absences
- 2.8 million lost workdays / year





# Multi-Pronged Approach

- Regulations
- Technologies
  - Research, Development & Demonstrations
  - Commercialization & Deployment
- Incentives



# SCAQMD Fleet Vehicle Rules

- Limited mobile source authority
- Public fleets of > 15 vehicles
- Purchasing new vehicle, must be alternative fuel
- Affects transit buses, refuse, school buses, airport shuttles, street sweepers



# AQMD Clean Fuels Program

- Established in 1988
- \$1 fee on DMV registrations (\$~12M/yr)
- Stationary source fee (~\$400k/yr)
- Research, develop, demonstrate, and deploy (*RD<sup>3</sup>*) clean technologies



# Technology Advancement Portfolio

- Near-term to longer-term
- “Planting many seeds”
- Developing “Pathways”

Fuel Cell



Renewables

Plug-ins



Clean Transit



Heavy-Duty  
Natural Gas

Fuel Cells



CNG

# AQMD's Incentive Programs

Carl Moyer	\$56 M annually
School Bus Program	\$106 M since 2001 \$70 M (Prop 1B)
Prop 1B Goods Movement	\$1 B for 4 years 55% to South Coast
Rule 2202 AQIP	\$2 M annually
MSRC	\$14 M annually



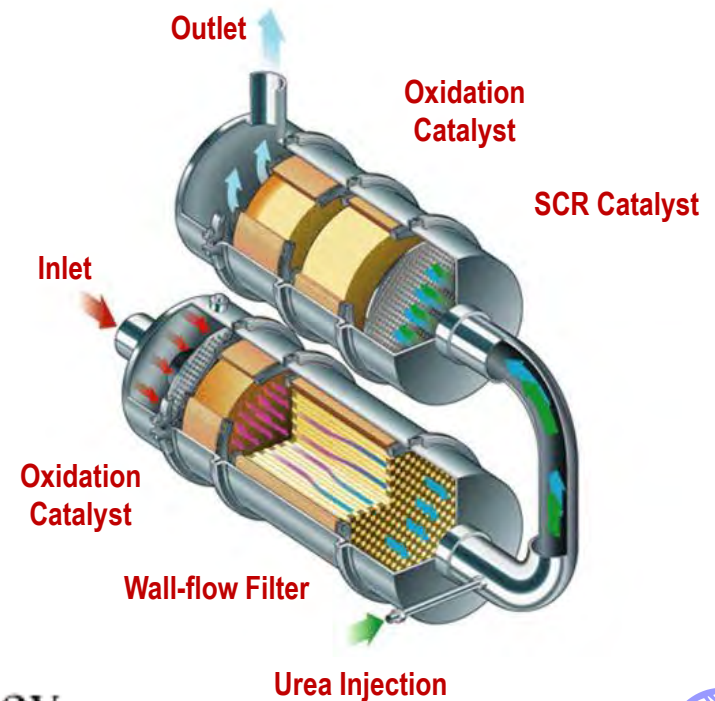
# Federal Funding

- ARRA Funding
  - DOE plug-in hybrid trucks
  - DOE Clean Cities LNG trucks
  - EPA retrofit SCR
- DERA Funding
  - Electrification of gantry cranes
  - Shore power
  - Repower of off-road equipment
  - Alternative maritime emissions control



# DERA Emerging Technologies

- Develop heavy-duty truck SCR/DPF retrofits
- Retrofit 138 heavy-duty trucks with SCR/DPF
- Reduce PM by 90%
- Reduce Nox by 60 – 80%
- Johnson Matthey
- EPA ARRA: \$4 million



Johnson Matthey



# Ports Clean Truck Program

- Prior to drayage trucks regulation (Jan 2010)
- 1,307 trucks
  - 854 diesel
  - 453 LNG
- Co-funding by AQMD, Ports, DOE and EPA for cleaner LNG trucks





# Final Takeaways

- Need policies + technologies
  - Partnerships for change
    - Technology providers
    - Demonstration sites
    - Local, regional, state and *federal*
  - Cannot sustain progress without national support or policy
- 
- A background image showing two people walking away from the camera on a grassy hill. The person on the left is wearing a dark suit and carrying a green bag, while the person on the right is wearing a yellow jacket and carrying a brown bag. The background is a blue sky with a faint globe visible at the bottom.

# California Clean Air Technology Initiative

- Initiated in 2008 as joint effort to address two worst AQ areas in California
- Collaborate to accelerate development and deployment of clean technologies
- Two showcase community programs established



United States  
Environmental Protection Agency



California  
Air Resources Board



South Coast  
Air Quality Management District



San Joaquin Valley  
Air Pollution Control District

# Thank You



South Coast  
Air Quality Management District

*Cleaning the air that we breathe...*



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