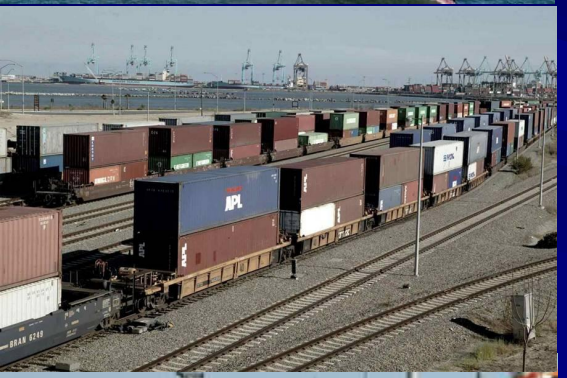
# Public Consultation Meeting
# Proposed Backstop Rules


May 4, 2010

# National Ambient Air Quality Standards (NAAQS)

- Federal Clean Air Act
  - PM2.5 (annual) NAAQS
  - Ozone (8-hour) NAAQS
- NAAQS Attainment Demonstration
  - 2015 for $PM_{2.5}$
    - NOx, SOx, $PM_{2.5}$ Emissions
  - 2024 for Ozone
    - NOx Emission
    - VOC Emissions*

* For port-related sources are not major contribution to VOC emissions



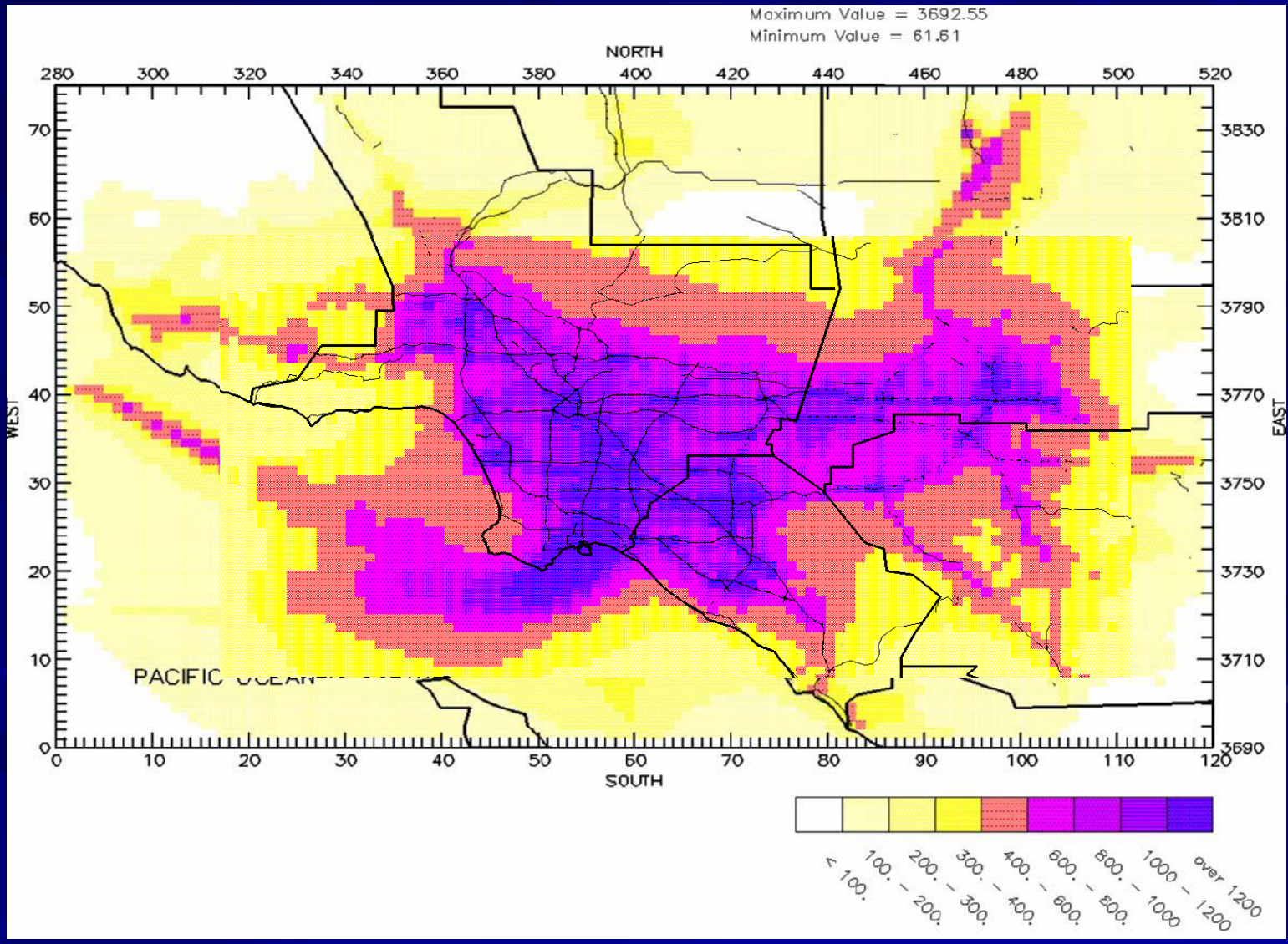

# Port's Contribution

- Nearly all of Port-related operations contribute to National Ambient Air Quality Standards
  - Ships
  - Cargo Handling Equipment
  - Locomotives
  - Drayage Trucks
  - Harbor Craft

# California Air Resources Board's Diesel Risk Reduction Plan

- October 2000
- DPM reduction goals
  - 75% by 2010
  - 85% by 2020

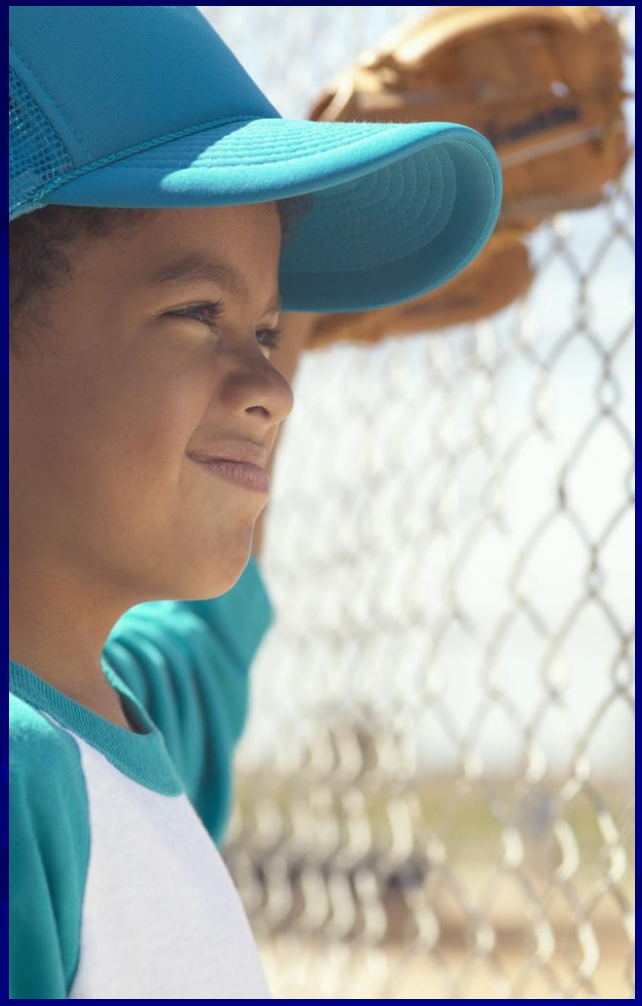
# Comparison Between MATES II and III



# MATES III Findings

- Annual average population weighted risk ~850 in a million
- Diesel exhaust is primary risk driver
- Highest risks are in and around the ports and transportation corridors
- Limitations of Findings
  - Regional analysis of health risk in the Basin
  - Localized impacts may be higher

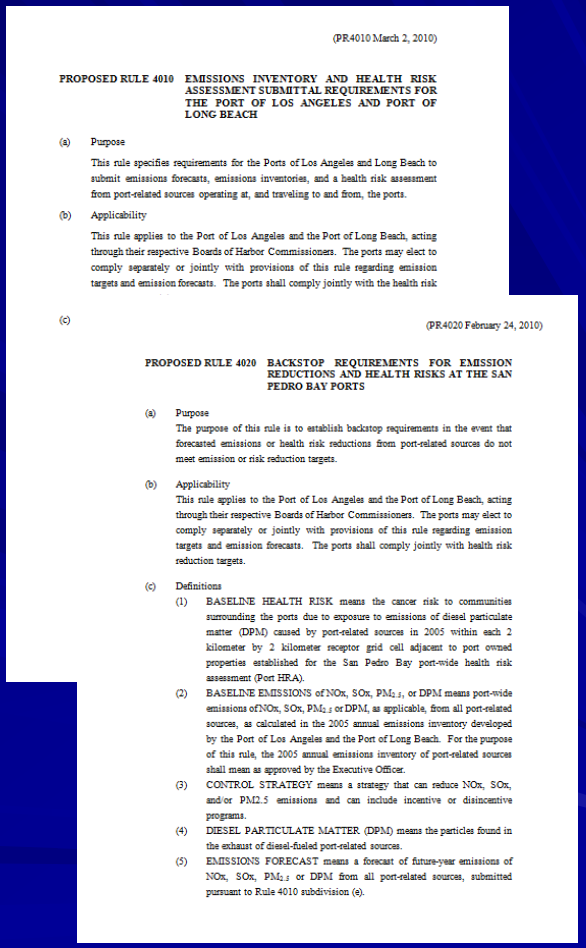
# Need for Backstop Rules



- Safety net
- Ensure port-related sources achieve “fair-share” emission reductions
- Ensure Basin attain:
  - 2015 Annual PM2.5 Standard
  - 2024 8-hour Ozone Standard
- Ensure localized reductions in DPM exposure

# Structure of Proposed Backstop Rules

- Two rule format
- Proposed Rule 4010
  - Administrative
  - Requires emissions inventory
- Proposed Rule 4020
  - Targets
  - Trigger for Backstops
  - Backstops



(PR4010 March 2, 2010)

**PROPOSED RULE 4010 EMISSIONS INVENTORY AND HEALTH RISK ASSESSMENT SUBMITTAL REQUIREMENTS FOR THE PORT OF LOS ANGELES AND PORT OF LONG BEACH**

(a) Purpose

This rule specifies requirements for the Ports of Los Angeles and Long Beach to submit emissions forecasts, emissions inventories, and a health risk assessment from port-related sources operating at, and traveling to and from, the ports.

(b) Applicability

This rule applies to the Port of Los Angeles and the Port of Long Beach, acting through their respective Boards of Harbor Commissioners. The ports may elect to comply separately or jointly with provisions of this rule regarding emission targets and emission forecasts. The ports shall comply jointly with the health risk

(c)

(PR4020 February 24, 2010)

**PROPOSED RULE 4020 BACKSTOP REQUIREMENTS FOR EMISSION REDUCTIONS AND HEALTH RISKS AT THE SAN PEDRO BAY PORTS**

(a) Purpose

The purpose of this rule is to establish backstop requirements in the event that forecasted emissions or health risk reductions from port-related sources do not meet emission or risk reduction targets.

(b) Applicability

This rule applies to the Port of Los Angeles and the Port of Long Beach, acting through their respective Boards of Harbor Commissioners. The ports may elect to comply separately or jointly with provisions of this rule regarding emission targets and emission forecasts. The ports shall comply jointly with health risk reduction targets.

(c) Definitions

(1) BASELINE HEALTH RISK means the cancer risk to communities surrounding the ports due to exposure to emissions of diesel particulate matter (DPM) caused by port-related sources in 2005 within each 2 kilometer by 2 kilometer receptor grid cell adjacent to port owned properties established for the San Pedro Bay port-wide health risk assessment (Port HRA).

(2) BASELINE EMISSIONS of NOx, SOx, $PM_{2.5}$, or DPM means port-wide emissions of NOx, SOx, $PM_{2.5}$ or DPM, as applicable, from all port-related sources, as calculated in the 2005 annual emissions inventory developed by the Port of Los Angeles and the Port of Long Beach. For the purpose of this rule, the 2005 annual emissions inventory of port-related sources shall mean as approved by the Executive Officer.

(3) CONTROL STRATEGY means a strategy that can reduce NOx, SOx, and/or PM2.5 emissions and can include incentive or disincentive programs.

(4) DIESEL PARTICULATE MATTER (DPM) means the particles found in the exhaust of diesel-fueled port-related sources.

(5) EMISSIONS FORECAST means a forecast of future-year emissions of NOx, SOx, $PM_{2.5}$ or DPM from all port-related sources, submitted pursuant to Rule 4010 subdivision (e).





# Applicability

- Ports of Los Angeles and Long Beach
- Port-related equipment
  - Ships
  - Locomotives
  - Cargo Handling Equipment
  - Trucks
  - Harbor Craft

# Overall Approach

**Targets Established**

- Criteria Pollutant Targets
  - NOx, SOx, $PM_{2.5}$
- Health risk target
  - DPM emissions, HRA

**Emissions Forecast**

- Ports submit emissions forecast of future-year emissions

**Is Backstop Triggered?**

- If forecast shows emissions expected to fall short of target, Backstop Triggered

**Backstop**

- Compliance Plan to make up emission or risk reduction shortfall

# Methodology for Establishing Criteria Pollutant Targets

- 2005 Baseline Emissions
  - Includes all port-related sources
  - Port's emissions data, reviewed by AQMD
- Apply percent reduction to future year emissions from 2005 Baseline
  - Existing rules and regulations
  - Control Measures in 2007 Air Quality Management Plan (AQMP)

# Proposed Criteria Pollutant Targets

- 2014:
  - 44% NOx
  - 86% SOx
  - 72% PM2.5
- 2023:
  - 52% NOx

# Health Risk Targets

- Percent reduction from 2005 baseline
- Based on CARB's Goods Movement Action Plan
- 2014 Target for DPM Emissions
  - 73% reduction
- 2020 Target for health risk reduction
  - 85% reduction within each 2 km X 2 km grid cell adjacent to port owned properties

# Forecasting Approach

- Proactive approach
- Forecasts “grown” from actual emissions
- Emissions forecast includes
  - Adopted federal, state, local regulations
  - Implementation of CAAP measures
  - CEQA mitigation measures
- Apply cargo growth forecast

# Emissions Forecasting

- Three required forecasts
  - 2012 for year 2014 (PM2.5 Standard)
    - NOx, SOx, $PM_{2.5}$, DPM
  - 2017 for year 2020
    - Health risk assessment
  - 2020 for year 2023 (Ozone Standard)
    - NOx

# Forecasting Timeline*

**2015 PM2.5 Standard**
In 2012, submit 2014 forecast for NOx, SOx, and PM2.5

**2024 Ozone Standard**
In 2020, submit 2023 forecast for NOx


**2020 Risk Standard**
In 2012, submit 2014 forecast for DPM

**2020 Risk Standard**
In 2017, submit 2020 forecast health risk for DPM

* Forecasts can be revised any time before forecasted date

# Backstop Triggers

- Backstop triggered if forecast shows target will not be met
- Port(s) may voluntarily submit updated forecast to show additional emission reductions

# Construction of Backstop Measures

- Criteria Pollutants Backstops
  - Emission Reduction Plan to eliminate shortfall
  - Implement by Target date
  - Off-ramp
- Health Risk
  - Risk Reduction Plan to eliminate risk shortfall
  - Implement as quickly as feasible, no later than 3 years
  - Time extensions with no off-ramp

# Criteria Pollutant Off-Ramp

- Reductions not needed for AQMP
- Cost-effectiveness
  - NOx:  Carl Moyer
  - SOx:  30,000 per ton of SOx
- No legal mechanism to implement control strategies

**EXIT ONLY**

# Time Extensions for Health Risk Reductions

- 2 Year Extension
  - Technology limitations
  - No legal mechanism
- AQMD Governing Board approval for extensions beyond first 2 years

**NO EXIT**

# Actual Emissions Reporting

- Actual emissions inventories required
  - For years 2014, 2020, 2023
- *"After-the-fact"* reporting
- Reconcile emissions forecasts
- Check to ensure compliance

# Key Differences Proposed Backstop and CAAP

- 2014 NOx Targets
- Demonstration of Health Risks

# Schedule

- Public workshop summer/fall 2010
- Adoption late 2010