




San Pedro Bay Ports Clean Air Action Plan

A joint presentation by the
Port of Los Angeles and Port of Long Beach

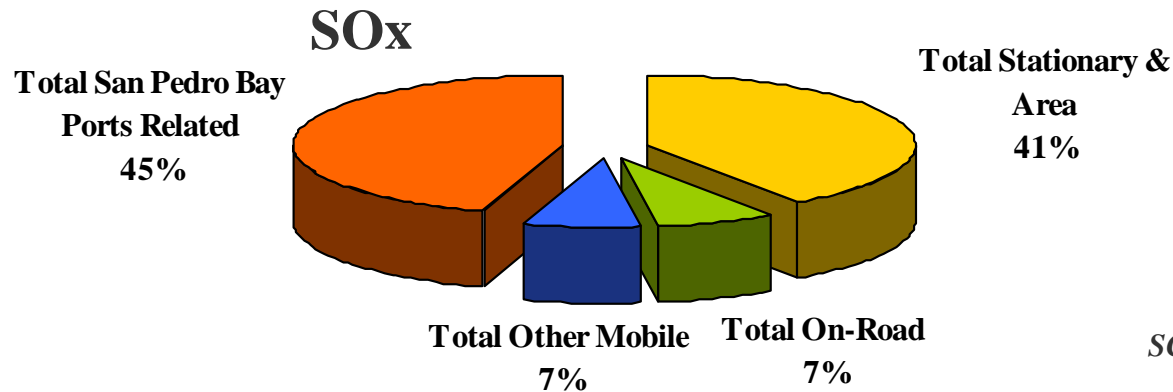
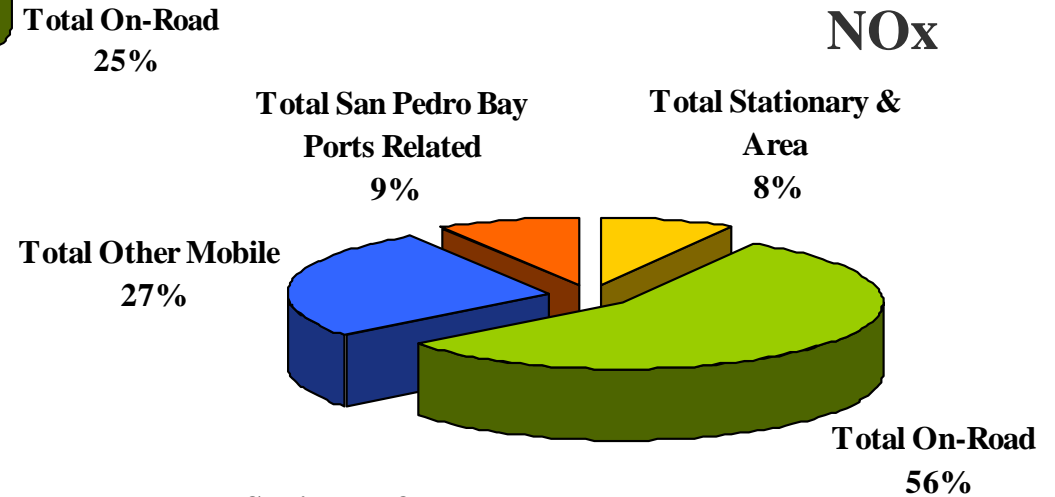
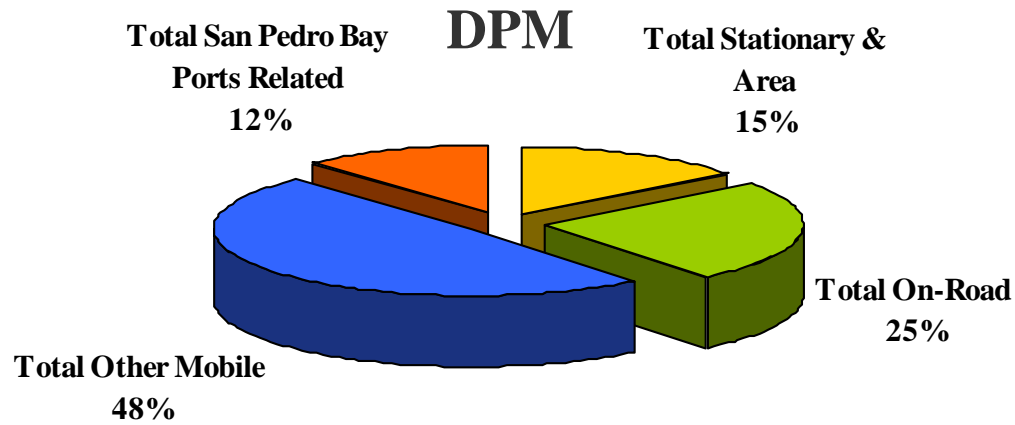


Action Plan Drivers

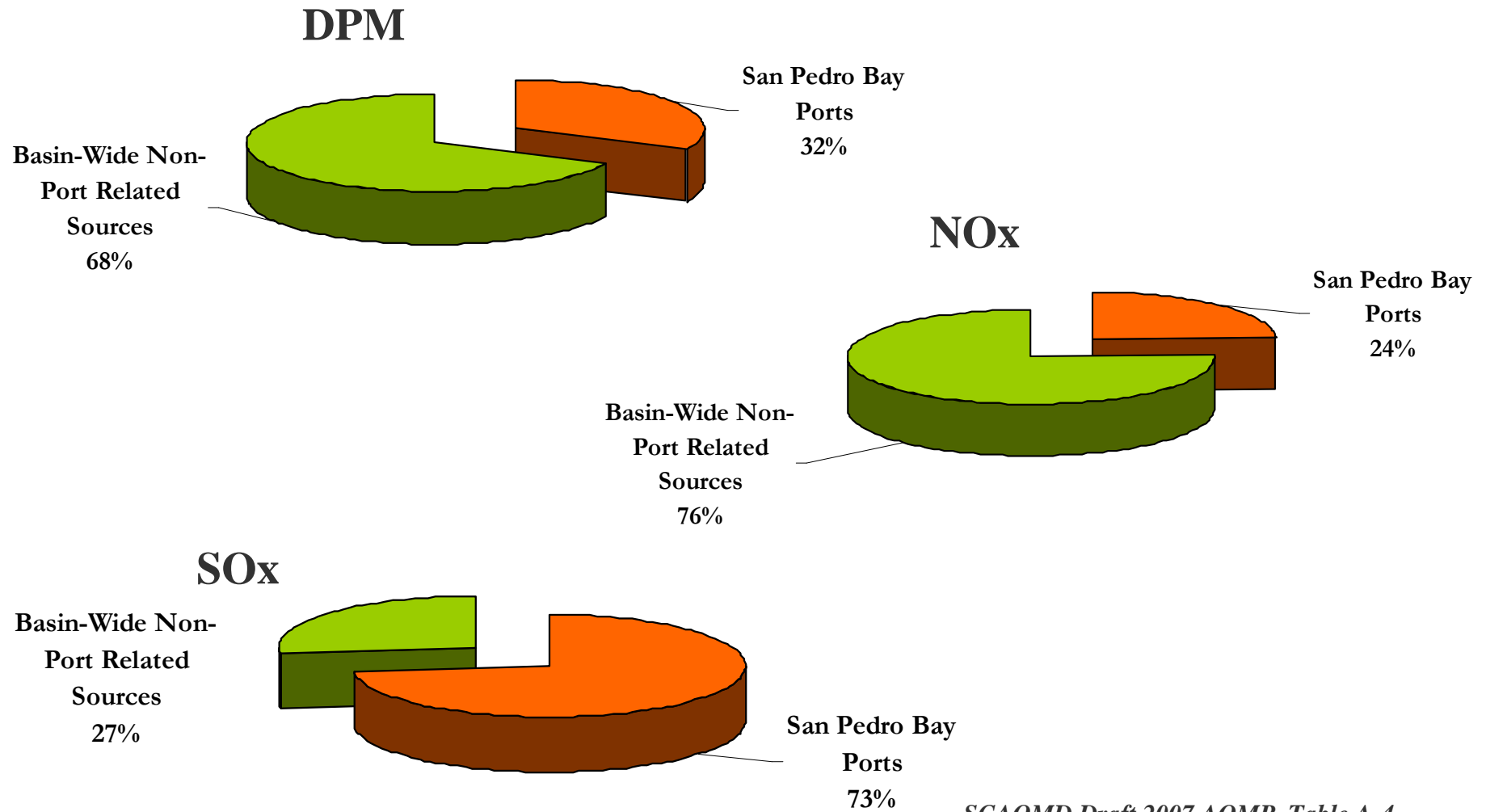
- **Minimize health risk from port operations**
- **Accelerate existing emissions reduction efforts**
- **Set consistent project-specific & source-specific standards**
- **Enable port development**



Port-Related Contribution to Basin 2002

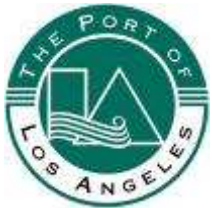


Projected Port-Related Contribution 2020 Without CAAP Implementation



Action Plan Development

- **Clean Port Summit – March 2006**
 - Outcome: work together towards solutions
- **SPBP Clean Air Action Plan Working Group formed**
 - Both Ports
 - South Coast Air Quality Management District (AQMD)
 - California Air Resources Board (CARB)
 - Environmental Protection Agency (EPA)

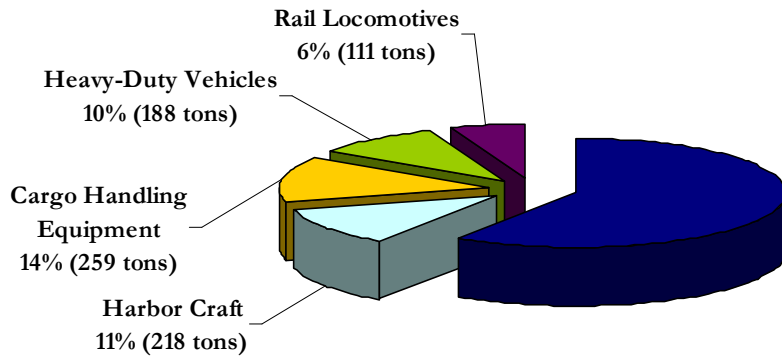


Sources and Challenges

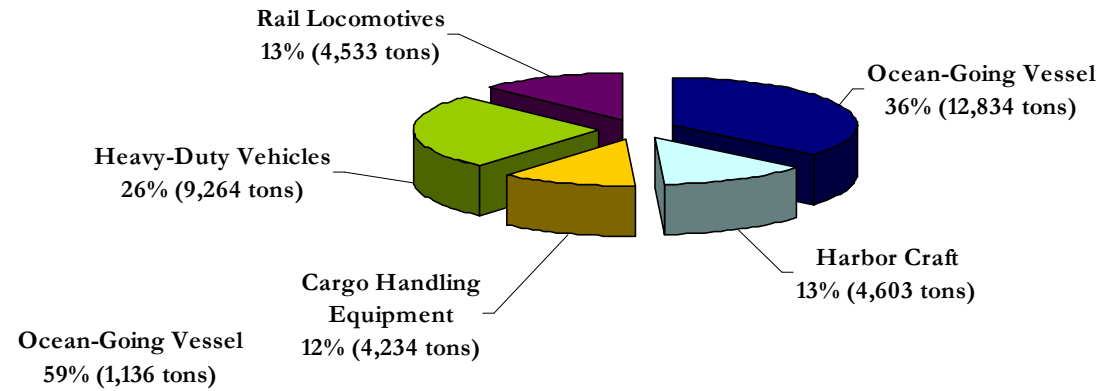


Pollutant Contribution by Source

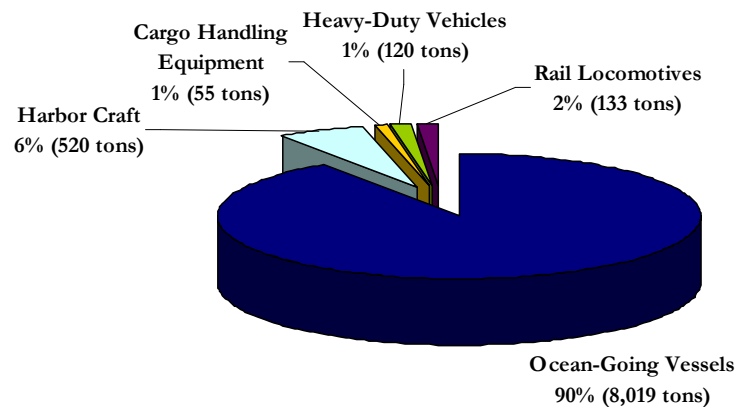
DPM



NOx

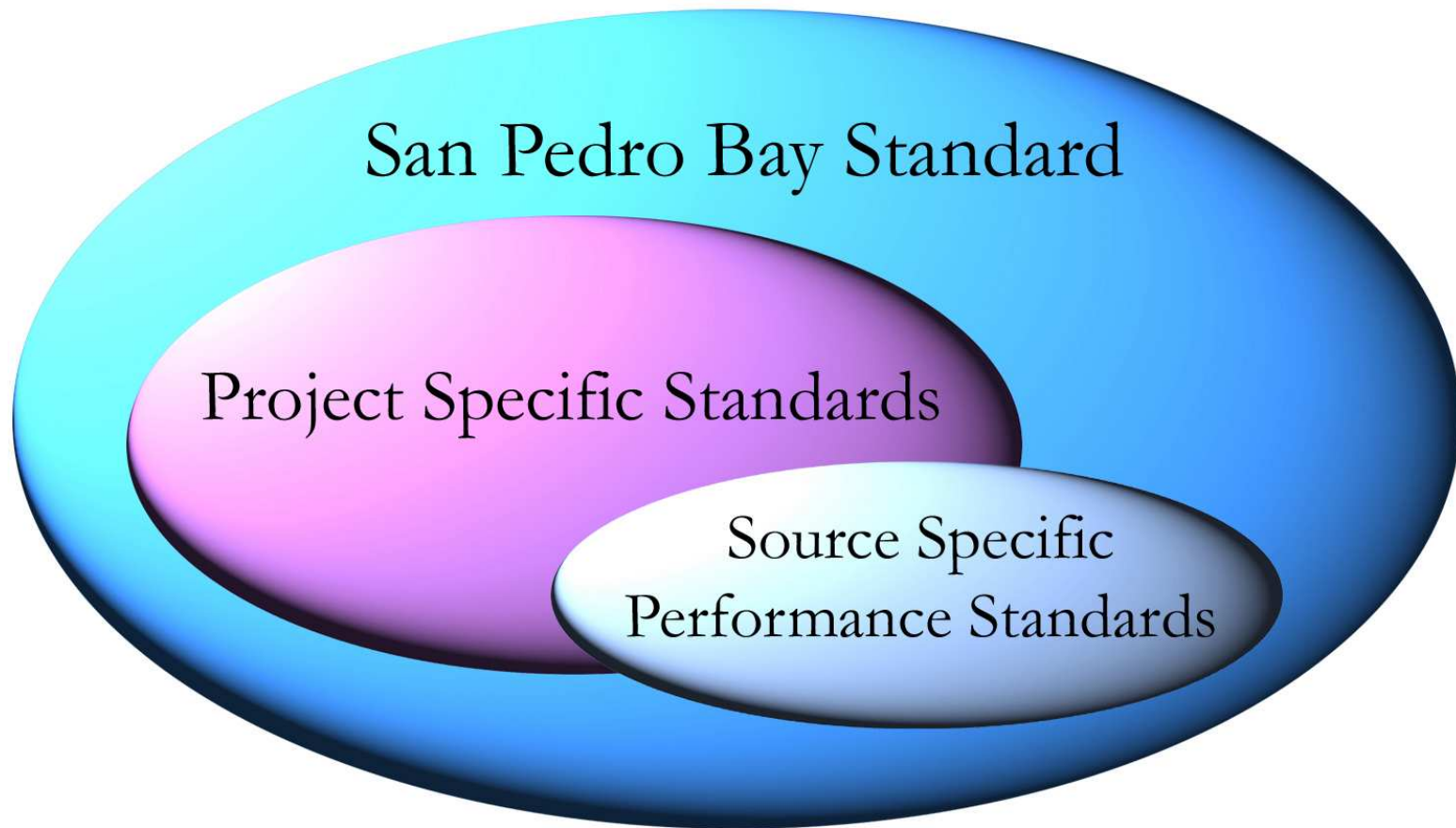


SOx




Port of Los Angeles Baseline 2001 & Port of Long Beach Baseline 2002

Three Levels of Standards



Standards – Three Levels

- **San Pedro Bay Standards**
 - Reduce public health risk from port-related toxics
 - Reduce port “Fair Share” pollutant emissions
 - Prevent port-related violations of National Ambient Air Quality Standards (NAAQS)
 - **Project Specific Standards**
 - Meet 10 in 1,000,000 excess cancer risk threshold
 - Implement maximum feasible controls for projects exceeding CEQA thresholds for criteria pollutants
 - **Source Specific Performance Standards**
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Ports' Five-Year Commitments

- **Heavy-Duty Vehicles (Trucks)**
 - Replacement/Retrofit of frequent & semi-frequent callers
 - LNG Fueling Infrastructure
 - Two Ports & SCAQMD \$206,000,000
- **Ocean-Going Vessels**
 - 100% compliance w/VSR to 20 nautical miles; extend to 40 nautical miles in '08
 - Port of Los Angeles – 15 berths will be AMP'd
 - Port of Long Beach – 10 to 16 berths will be shore-powered
 - $\leq 0.2\%$ sulfur fuels for main & auxiliary engines
 - NO_x and PM controls on new and existing vessels
 - Two Ports \$201,800,000

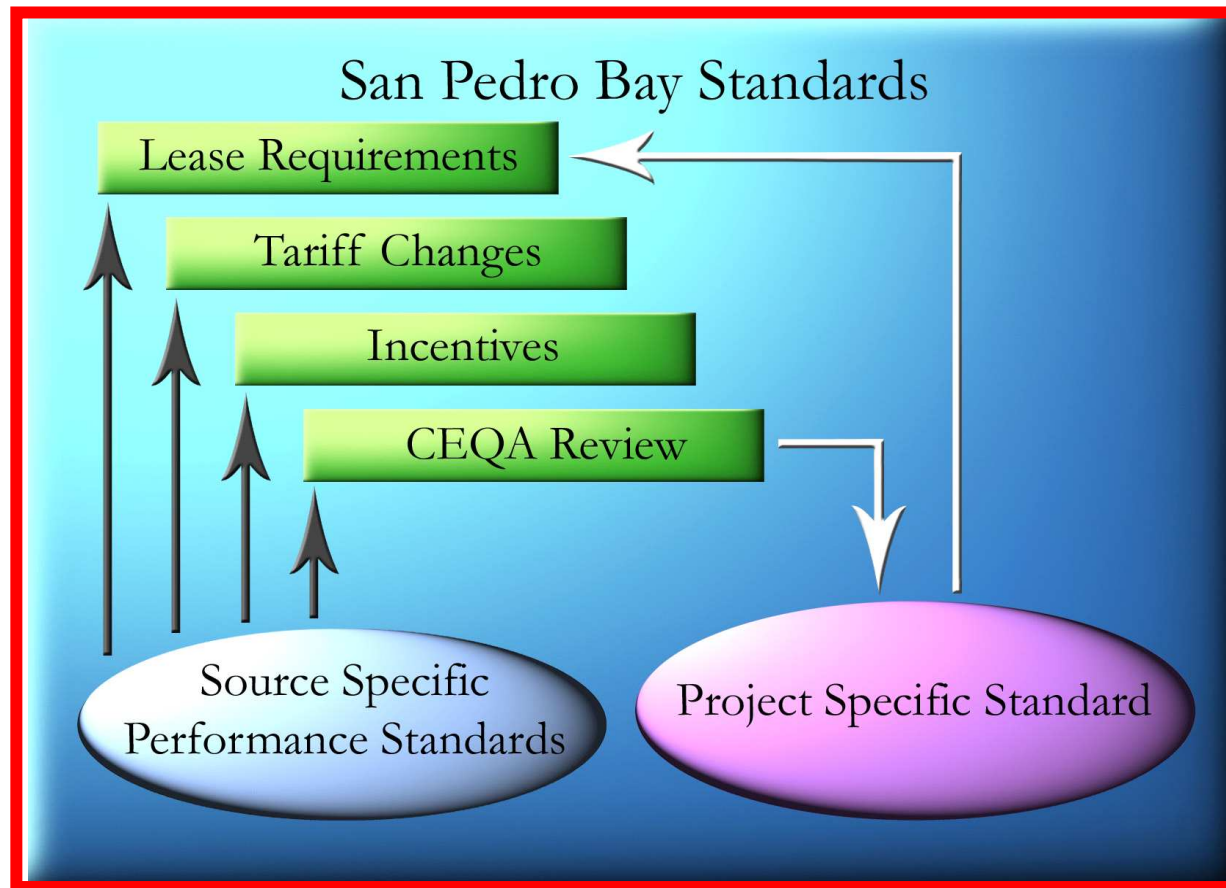


Ports' Five-Year Commitments


- **Railroad Locomotives**
 - Standards for switcher and line-haul locomotives
 - Standards for new or modified rail yards
 - Two Ports & SCAQMD \$21,000,000
- **Cargo Handling Equipment**
 - Standards for equipment
- **Harbor Craft**
 - Standards for harbor craft
- **Infrastructure and Efficiency Improvements**
 - Two Ports \$5,000,000
- **Technology Advancement & Source Testing**
 - Two Ports \$15,000,000 (minimum)



Relationships of Implementation Strategies

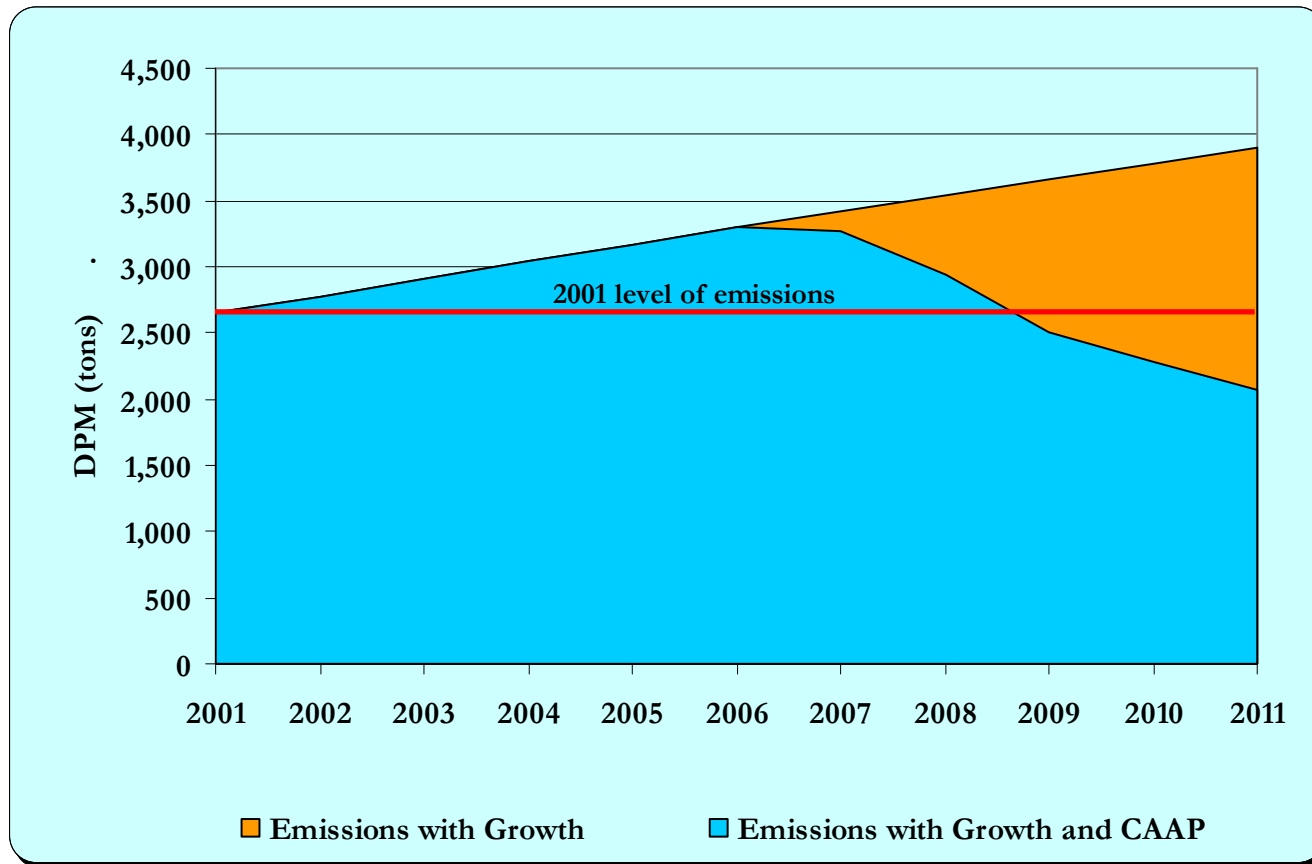


Technology Advancement Program

- **Mission: Accelerate the availability of new, clean technologies to move towards an emissions free port**
 - **4 focus areas:**
 - CAAP Control Measure Requirements
 - “Green Container” Transport Systems
 - New/Emerging Technology Testing
 - Emissions Inventory Improvements
 - **Advisory Committee: EPA, CARB, AQMD**
 - Combine expertise & resources
 - **Types of Projects: Port Generated Projects, Solicited and Unsolicited proposals**
 - **Evaluation Criteria to prioritize:**
 - emission reductions (DPM, NO_x, SO_x, GHGs, ultrafines)
 - cost effectiveness
 - **Port Funding: \$15 million over 5 years**
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Future Emissions Projections with Implementing CAAP

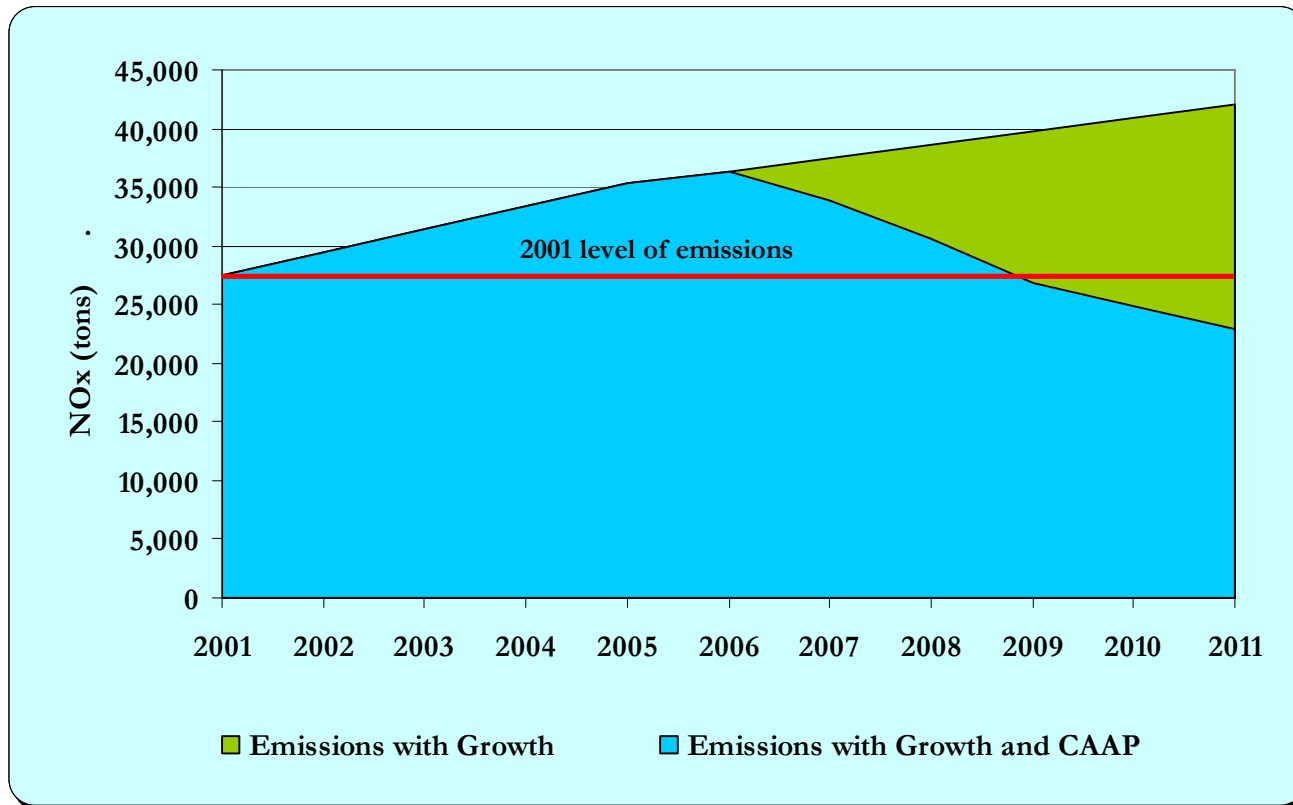
DPM



Using CARB's Goods Movement Plan growth assumptions

Future Emissions Projections with Implementing CAAP

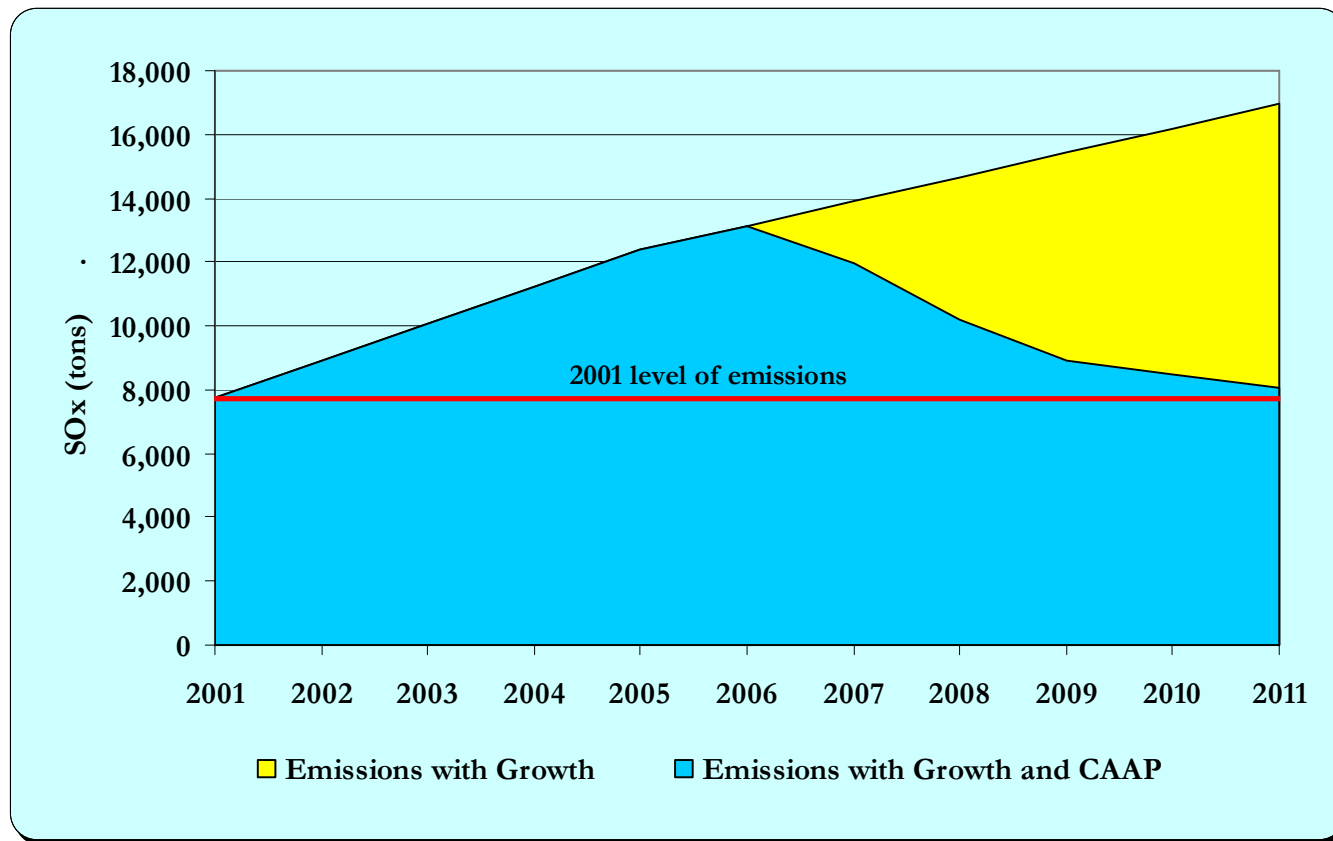
NO_x



Using CARB's Goods Movement Plan growth assumptions

Future Emissions Projections with Implementing CAAP

SO_x



Using CARB's Goods Movement Plan growth assumptions

Funding


Proposed Minimum Commitments Over Next Five Years:

- **Port of Los Angeles** **\$177,500,000**
- **Port of Long Beach**
\$240,400,000*
- **SCAQMD Initial Commitment** **\$47,000,000**
- **Impact Fee/State Bond/Other** **\$1,602,900,000**

*- POLA & POLB spending equal on CAAP; POLB higher because of shore-power infrastructure costs



Tracking, Monitoring, and Reporting

- **Expanding Port-Area Air Monitoring Network**
 - Two Ports and AQMD
 - Monitors Air Quality
 - Cooperation on Methods/Evaluation
 - **Emissions Inventory**
 - Regular Updates
 - **Monitor Progress on Clean Air Action Plan**
 - Track implementation of each measure
 - **Report Progress on Clean Air Action Plan**
 - At least annually
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POLB/POLA Advanced Cargo Transportation Technology Evaluation

Project Purpose

- Systems analysis of technologies for moving containers from ports to (ICTF)
 - Compare/contrast/costs/benefits to drayage (with or without cleaner truck engines/fuels)



Scope of Work


1. Compare/contrast following technologies
 - SkyTech Transportation, Inc.: linear induction motor (LIM) system
 - General Atomics: Electric Container Conveyor (EECO), Maglev system
 - Texas Transportation Institute (TTI) and the Freight Shuttle Development Corporation (FSDC): SAFE Freight Shuttle, linear induction motor system
 - MegaRail Transportation Systems, Inc.: Cargo Rail rubber-tire, electric propulsion
 - TransRapide, Maglev
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Scope of Work (cont.)

2. Develop detailed descriptions for several operational scenarios
 - Terminal layout/operations, guideway alignment, right-of-way



Scope of Work (cont.)

3. Estimate impacts and performance measures
 - Reduction in truck trips
 - Reduction in truck Miles of Travel
 - Reduction in criteria and toxic pollutants
 - Changes in noise and aesthetic impacts
 - Capital costs
 - Operating costs
 - Cost-effectiveness
 - Unit costs
 - System capacity
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Scope of Work (cont.)

3. Estimate impacts and performance measures (cont.)
 - Reduction in truck accidents
 - Reduction in health care costs
 - Impacts on safety
4. Evaluate institutional and funding issues



Other Technology Efforts

- I-710 EIR/EIS (e.g. Ports to/from Washington Blvd. Railyards)
 - Consultant NTP expected by May
- Impending SCAG RFP for regional maglev deployment

