

Draft 2010 Clean Air Action Plan Update

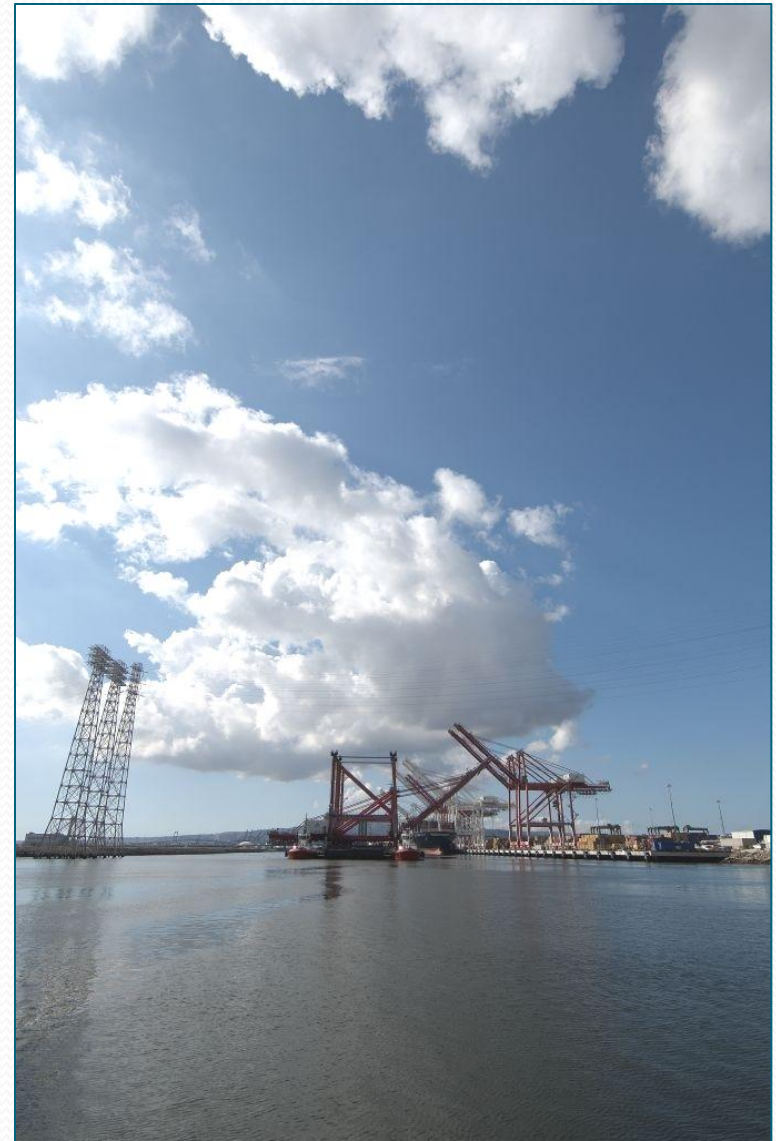


Port of
LONG BEACH
The Green Port

Public Workshop
April 2010

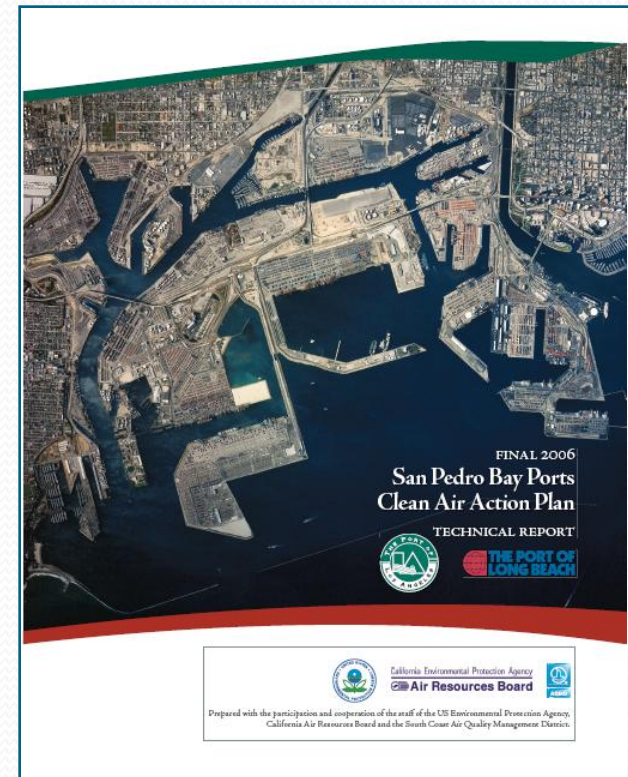
Presentation Outline

- CAAP Background
 - Accomplishments
- Update to the CAAP
 - San Pedro Bay Standards
 - Measures
 - Emissions Benefits
 - Budget
- Next Steps



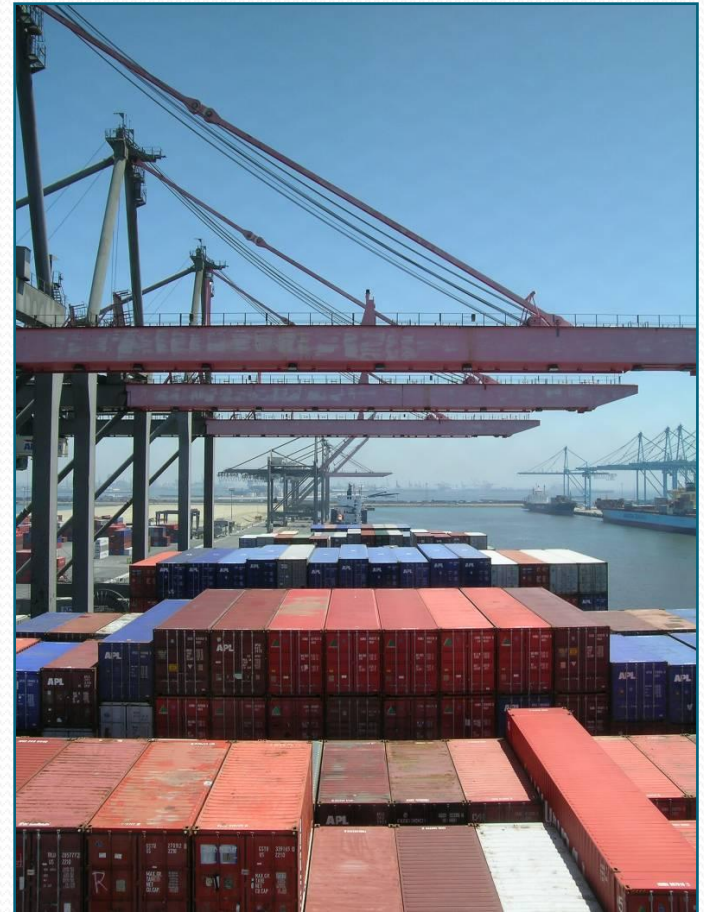
What is the Clean Air Action Plan?

- Joint plan adopted in November 2006 by POLA & POLB
- To significantly reduce air pollution from port-related mobile sources by 2012
- Developed in cooperation with USEPA, CARB, AQMD



Clean Air Action Plan Principles

- Minimize health risk
- Reduce “fair share” of emissions
- Set consistent standards
- Allow port development to continue



Accomplishments

- Clean Truck Program (HDV1)
 - Compliance phase-in beginning October 2008
 - Clean trucks: 77% POLB, 84% POLA (Feb. 2010)
 - Truck pollution reduced nearly 80% (Jan. 2010), almost two years ahead of schedule
- LNG on-road truck fueling station constructed and operational since early 2009 (HDV2)

Accomplishments (cont.)

- Technology Advancement Program (TAP)
 - Established in March 2007
 - As of early-2010, ports have funded \$5.4 million in projects



Accomplishments (cont.)

- Vessel Speed Reduction (OGV1)
 - Incentive programs expanded to 40nm from Point Fermin
 - 2009 Compliance:
 - POLB: 95% to 20 nm, 72% to 40 nm
 - POLA: 90% to 20 nm, 53% to 40 nm (9/09 – 12/09)
- Vessel Engine Fuels (OGV3 & 4)
 - Port Fuel Incentive Program (7/08 – 6/09)
 - CARB vessel fuel rule effective 7/09

Accomplishments (cont.)

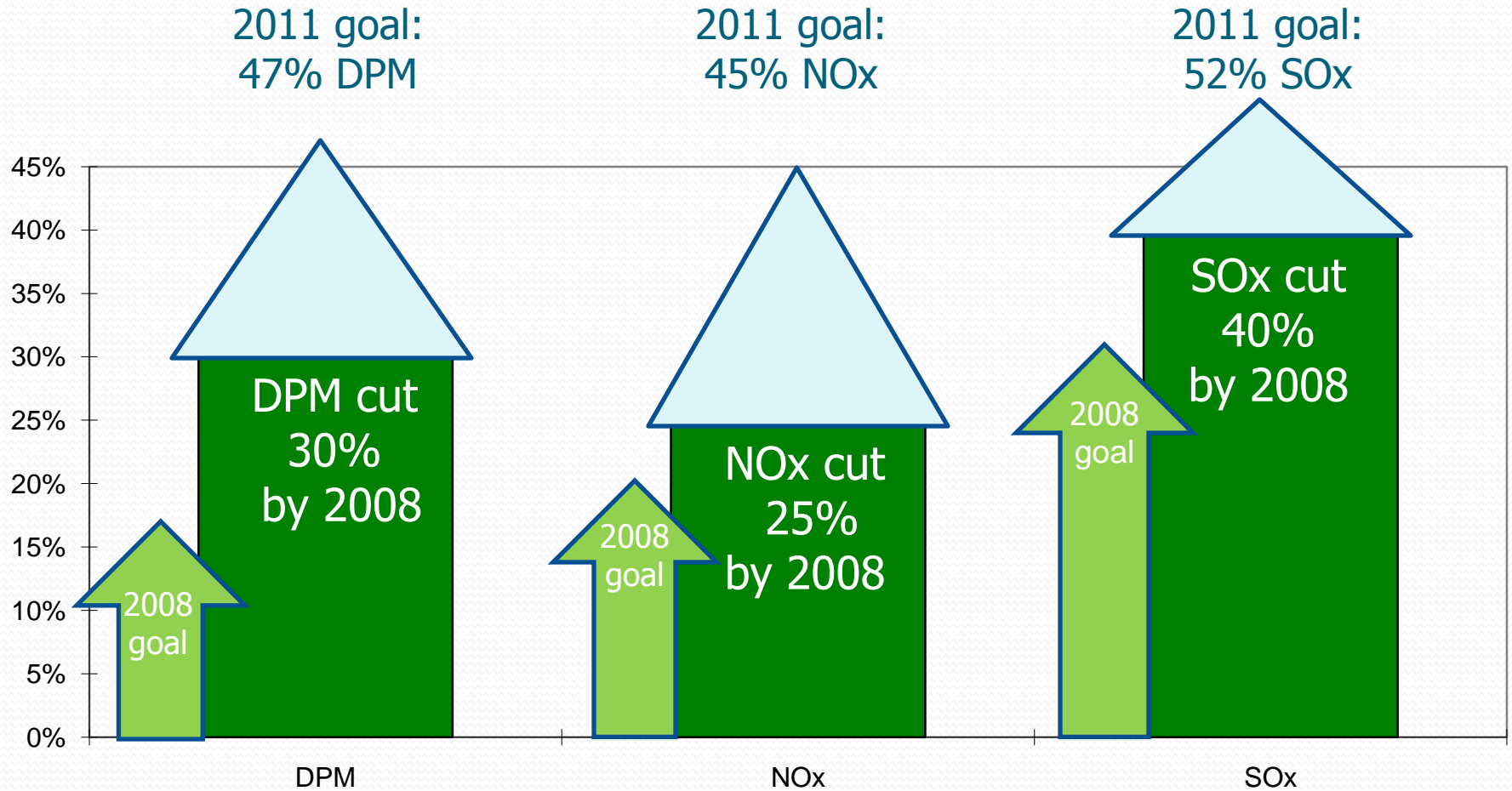
- Shore Power (OGV2)
 - POLA
 - 2 container berths completed
 - 1 cruise, 1 container expected 2nd Quarter 2010
 - POLB
 - 1 container berth completed
 - 1 liquid bulk berth completed
 - 1 dry bulk terminal completed
- Remaining Cruise & Containers Terminals by 2014

Accomplishments (cont.)

- Port switcher locomotives upgraded in 2008 to Tier 2 and Tier 3 gensets (RL1)
- Significant upgrades of harbor craft and cargo handling equipment (HC1, CHE1)

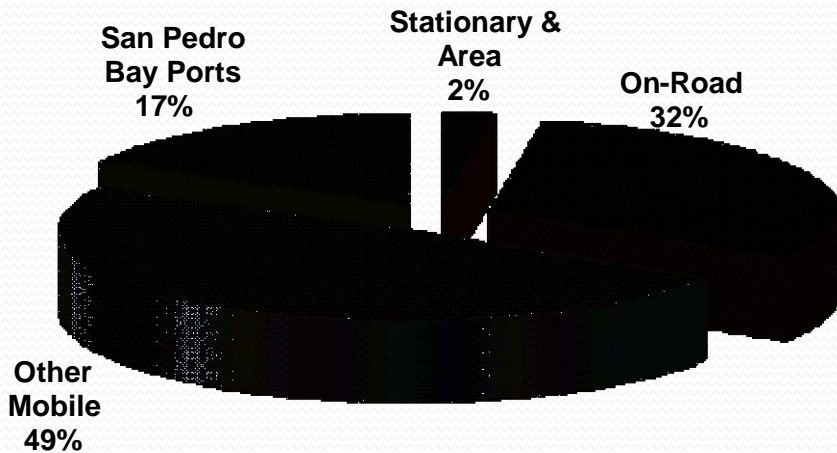


Achieving Reduced Emissions

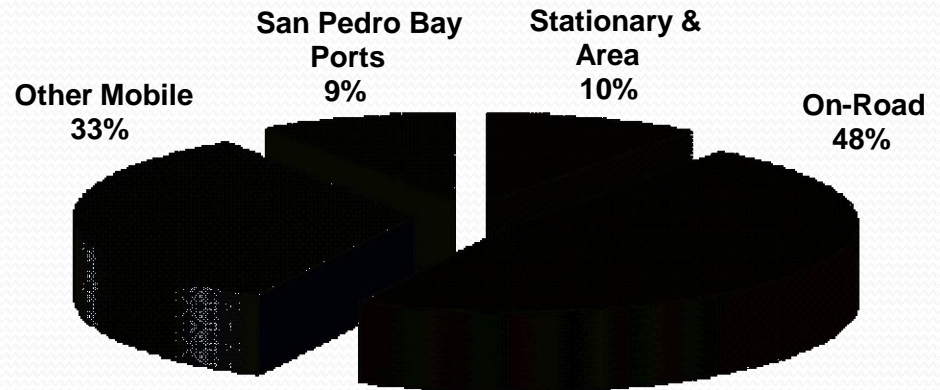


2008 Port Contribution to the SCAB

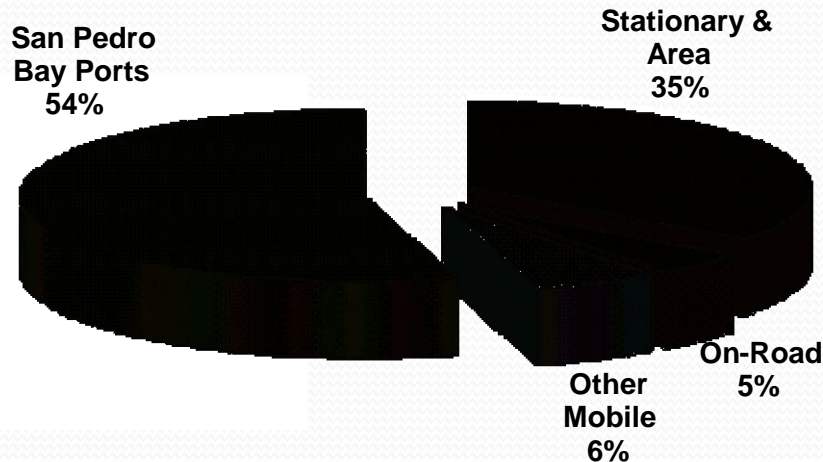
DPM



NOx

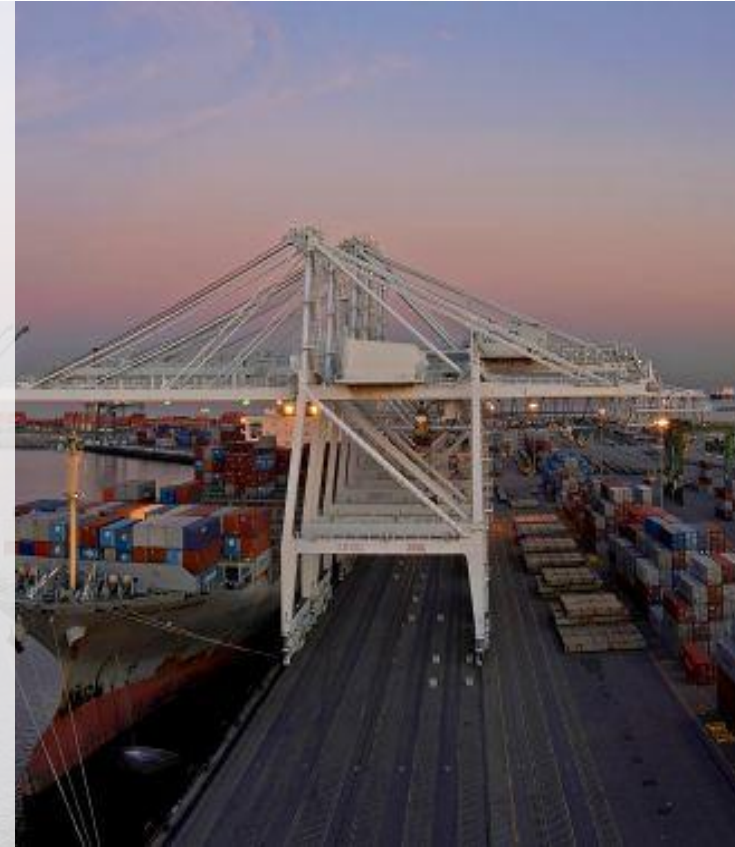


SOx



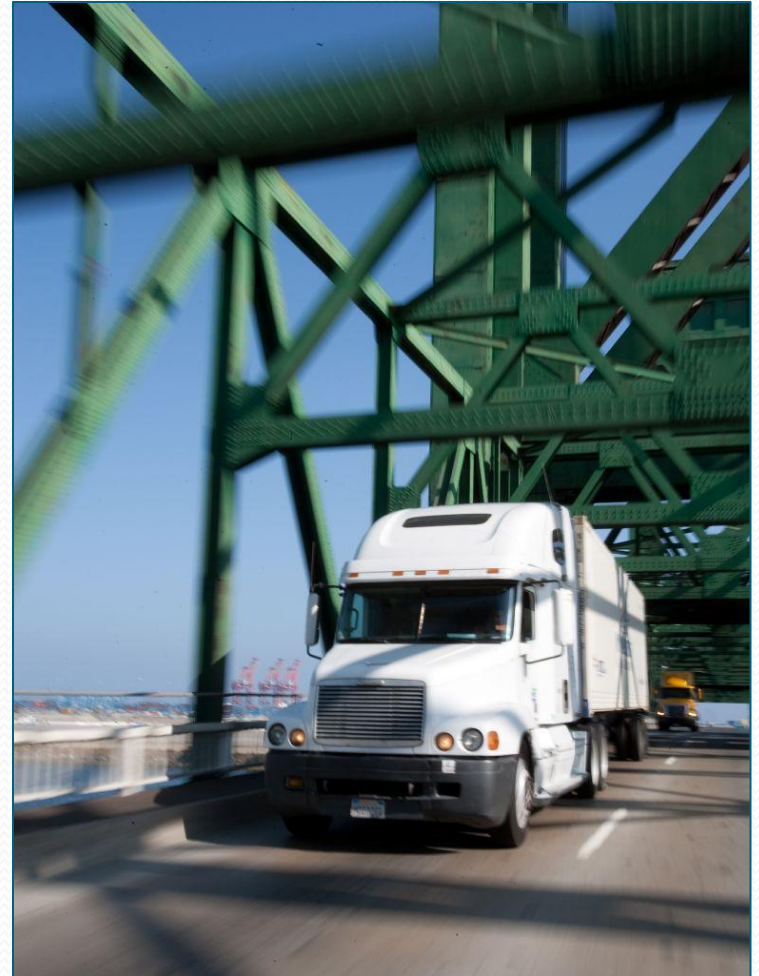
Updates

- CAAP is a “living,” on-going process:
 - Review existing measures
 - Evaluate new measures and technologies
 - Incorporate new regulations
 - Incorporate new information



CAAP Update Highlights

- San Pedro Bay Standards
 - Emissions Reduction Standards
 - Health Risk Reduction Standard
- Updated implementation measures



San Pedro Bay Standards

- Long-term goals for cumulative port-related operations
 - Reduce “fair-share” of emissions so the region can meet 2014 and 2023 ambient air quality standards
 - Expeditious reduction in health risk from port-related mobile sources



Emissions Forecasting

- Developed an agreed upon methodology and extensively reviewed results with the agencies
- Utilized the ports' latest cargo forecast (2007)
- Included port CAAP commitments and currently adopted regulations as of July 2008
- Forecasted emissions to 2014 and 2023 and compared to 2005 baseline

Emissions Forecasting Results

- 2014 reductions compared to 2005
 - 72% less DPM
 - 19% less NOx
 - 93% less SOx

- 2023 reductions compared to 2005
 - 75% less DPM
 - 18% less NOx
 - 92% less SOx

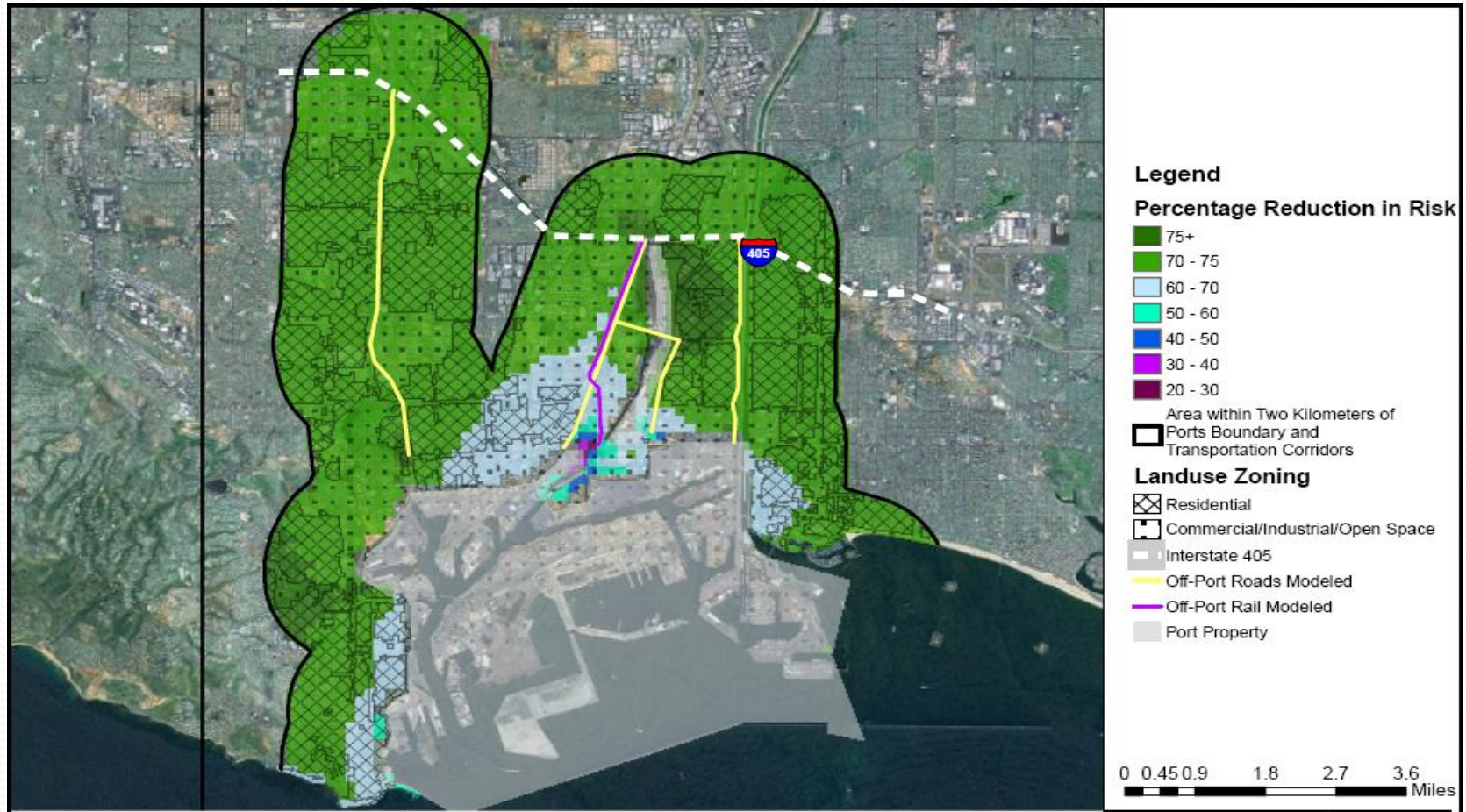
Health Risk Assessment

- Developed an agreed upon protocol with the Agencies
 - Consistent with ARB Exposure Study Methodology completed for ports in 2006, with updates
- Health Risk Assessment based upon spatially allocated 2005 baseline and 2020 forecast DPM emissions
- Comparison of 2020 to 2005 baseline

Health Risk Assessment Results



Health Risk Assessment Results



Proposed San Pedro Bay Standards

- Emissions Reduction Standards
 - By 2014, reduce emissions by:
 - 72% DPM
 - 22% NOx
 - 93% SOx
 - By 2023, reduce emissions by:
 - 77% DPM
 - 59% NOx
 - 92% SOx

Proposed San Pedro Bay Standards

- Health Risk Reduction Standard
 - By 2020, reduce the population-weighted residential cancer risk of port-related DPM emissions by 85%, in highly-impacted communities located proximate to port sources and throughout the residential areas in the port region

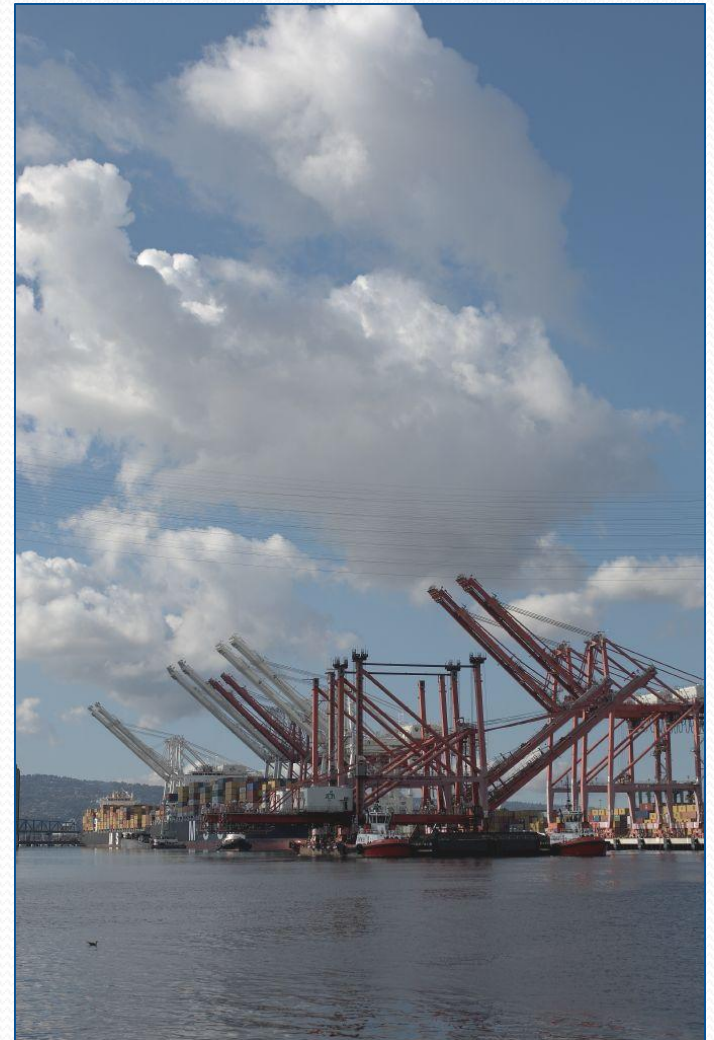


San Pedro Bay Standards Implementation

- The Standards will be achieved through:
 - Implementation of the strategies in the CAAP
 - In individual projects, all existing CAAP strategies and regulations will be included and any new and feasible measures beyond the CAAP
 - In updates to the CAAP, the ports will include new and feasible measures
 - Regulatory actions by the agencies to implement requirements to control specific source categories

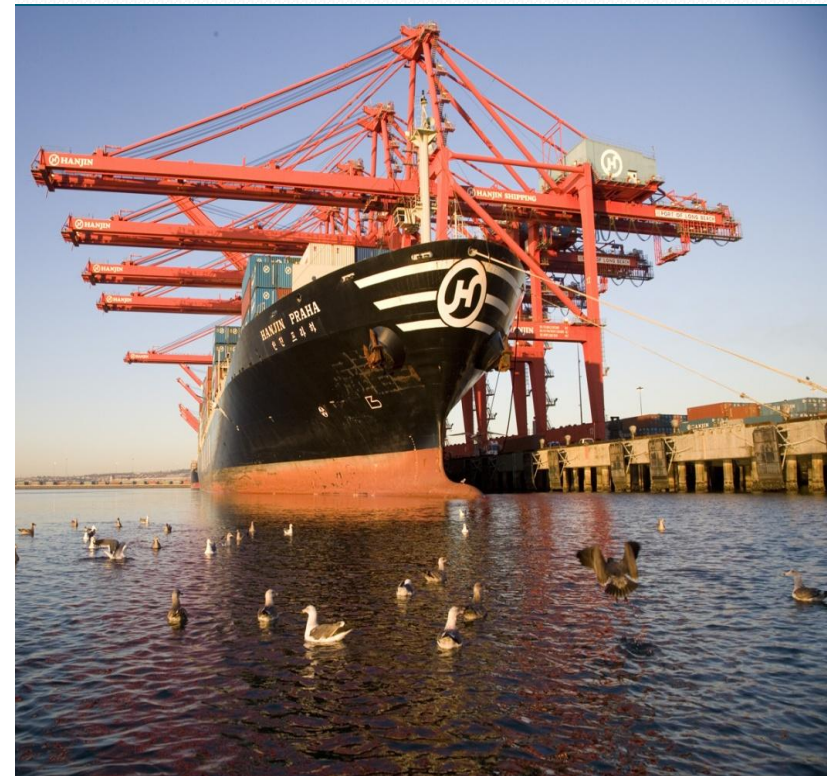
New/Revised Measures in the CAAP

- Measure Enhancements
 - OGV5 – Cleaner OGV Engines
 - OGV6 – Vessel Technologies
 - RL3 – Near-dock Rail Yards
 - All measures have been updated to reflect actual implementation & latest planning



Measure OGV5

- Cleaner OGV Engines
 - Focus on early deployment of new, cleaner vessels into the fleet
 - Work with vessel industry to identify effective strategies
 - Develop program for Board consideration



Measure OGV6

- Vessel Engine Technology Improvements
 - Focus on deployment of clean technologies for existing fleet
 - Work with vessel industry to identify and demonstrate



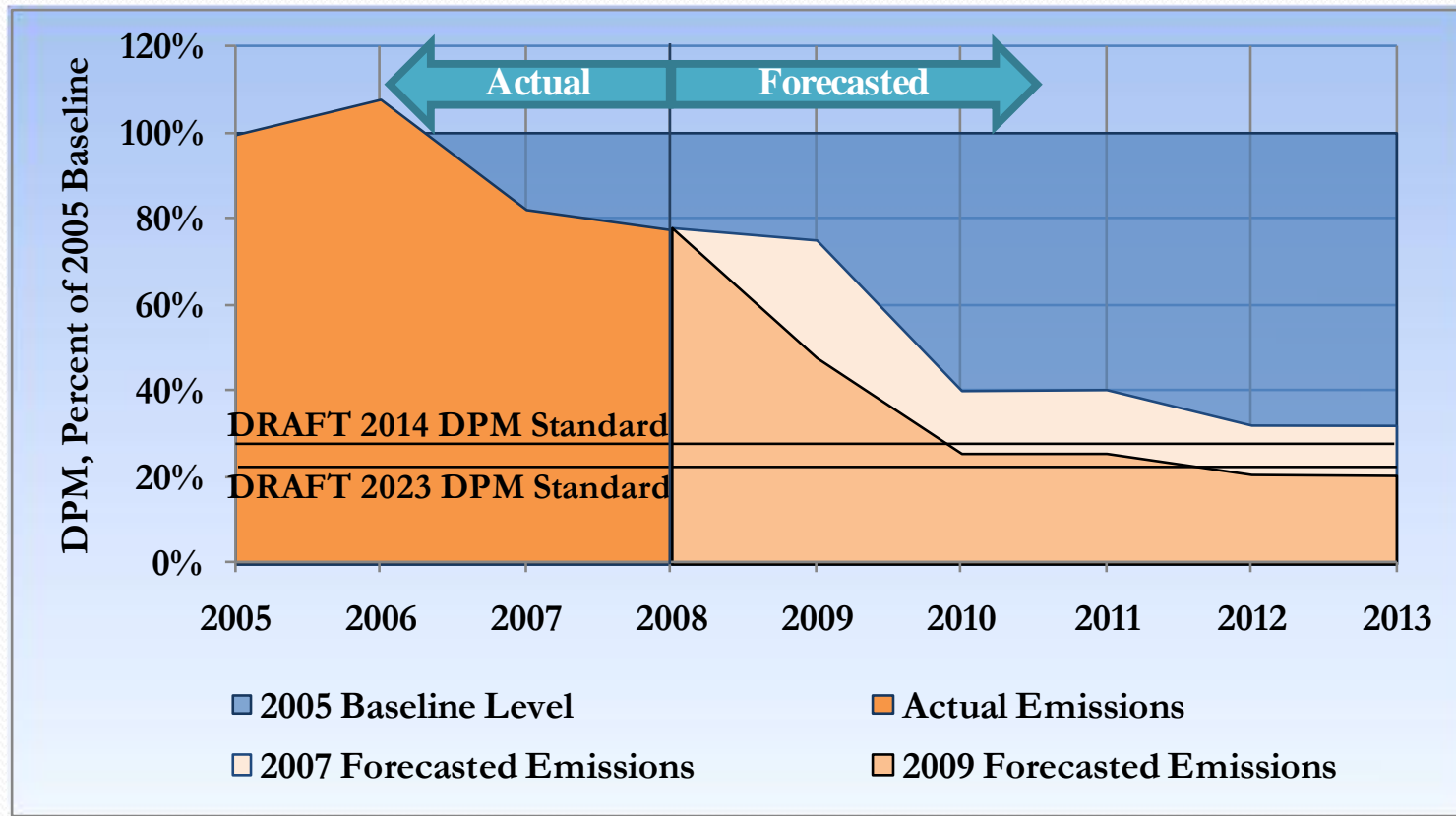
Measure RL3

- New and Redeveloped Near-Dock Rail Yards
 - Support statewide locomotive goal
 - Establishes minimum performance standard for locomotives and equipment for near-dock rail projects



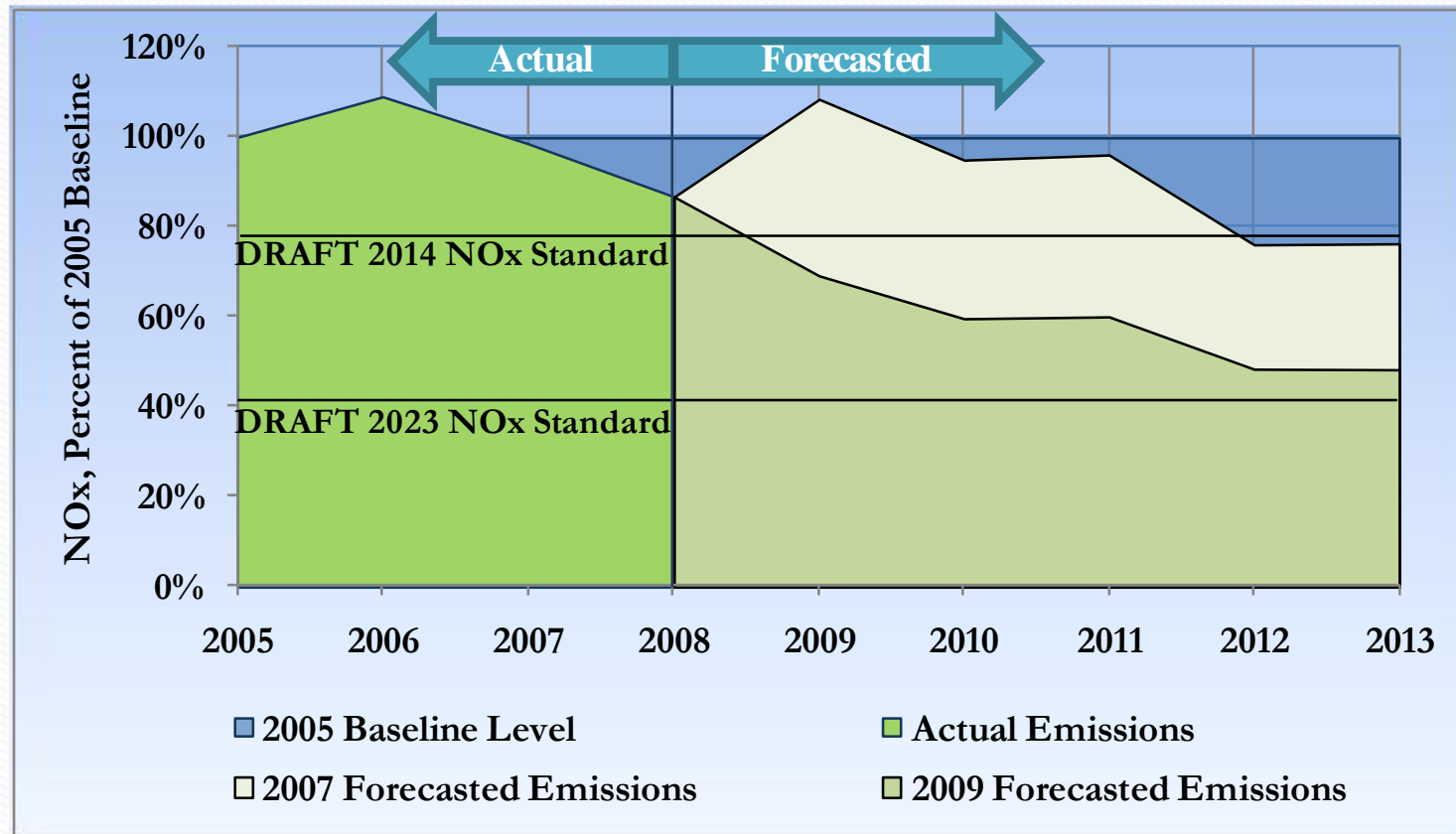
Emissions Benefits

- DPM Actual and Forecasted Reductions



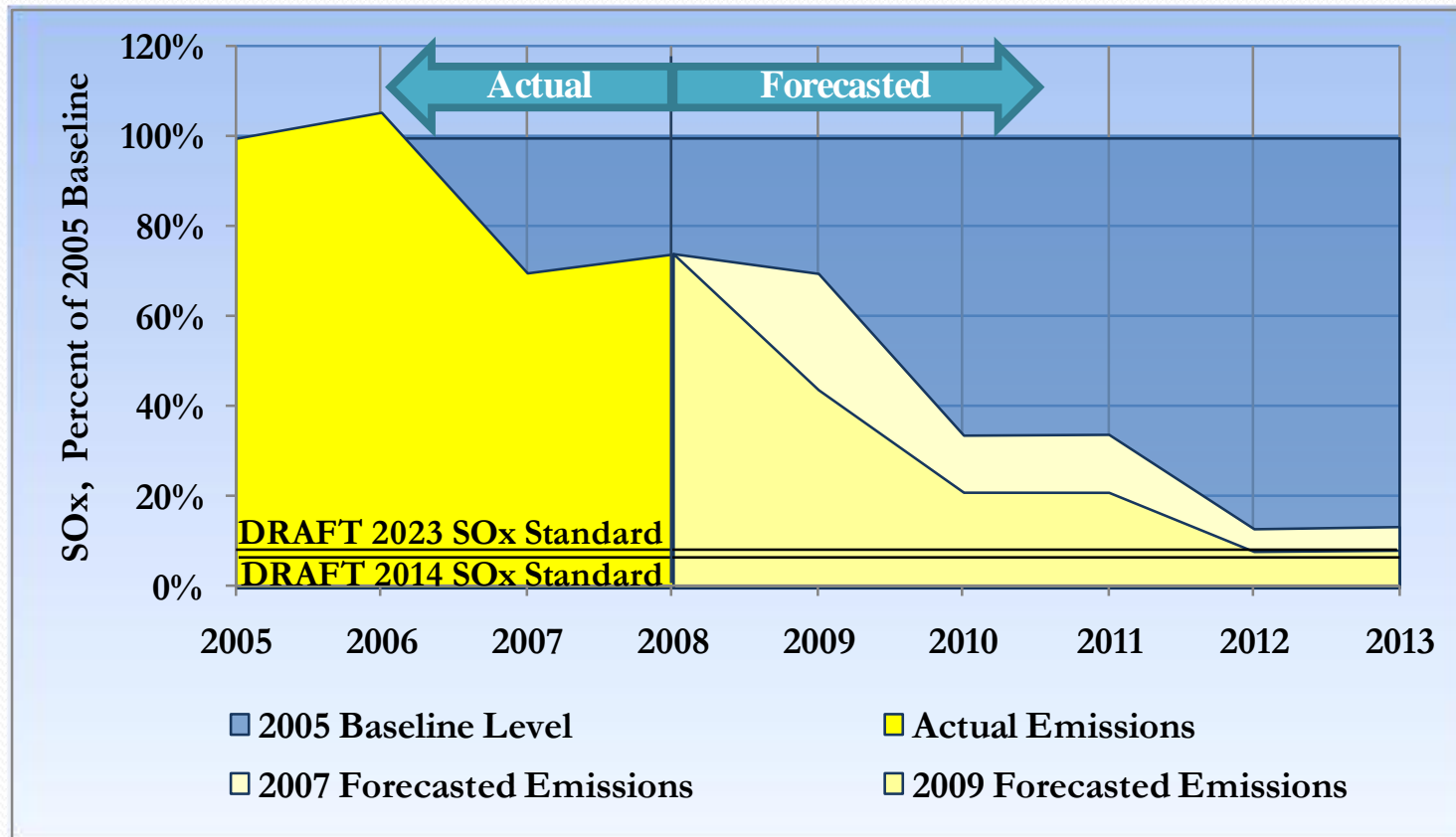
Emissions Benefits

- NOx Actual and Forecasted Reductions



Emissions Benefits

- SOx Actual and Forecasted Reductions



Budget

- Port Funding
 - Funding to Date (2006 – 2008)
 - POLA: \$55.5 M
 - POLB: \$48.8 M
 - Forecasted Funding (2009 – 2013)
 - POLA: \$194.5 M
 - POLB: \$256.0 M

Budget

- Agency Funding
 - Funding to Date (2006 – 2008)
 - USEPA: \$375 k
 - CARB: \$784 k
 - AQMD: \$5.0 M
 - Forecasted Funding (2009 – 2013)
 - USEPA: \$5.6 M
 - CARB: \$98 M
 - AQMD: \$8.5 M

Next Steps

- Public release of Draft CAAP Update – April 7th
- Collection of public comments:
 - 2010CAAP@cleanairactionplan.org
- Public Workshops
 - April 21 – San Pedro, Crowne Plaza, 7 pm
 - April 27 – Long Beach City Council Chambers, 7 pm
- Public comment period ends – May 7th
- Proposed final CAAP Update to be presented to each port's Board for approval