Draft 2010
Clean Air Action Plan
Update

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 2\(^{nd}\) 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

2011 goal:
- DPM: 47%
- NOx: 45%
- SOx: 52%

2008 goal:
- DPM cut 30% by 2008
- NOx cut 25% by 2008
- SOx cut 40% by 2008
2008 Port Contribution to the SCAB

**DPM**
- San Pedro Bay Ports: 17%
- Stationary & Area: 2%
- On-Road: 32%
- Other Mobile: 49%

**NOx**
- San Pedro Bay Ports: 9%
- Stationary & Area: 10%
- On-Road: 48%
- Other Mobile: 33%

**SOx**
- San Pedro Bay Ports: 54%
- Stationary & Area: 35%
- On-Road: 5%
- Other Mobile: 6%
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

![Graph showing NOx emissions reduction from 2005 to 2013, with actual emissions and forecasted emissions for 2007, 2009, and 2009, against the baseline level and standards for 2014 and 2023.](image-url)
Emissions Benefits

- SOx Actual and Forecasted Reductions

![Graph showing SOx emissions comparison between actual and forecasted values from 2005 to 2013. The graph includes actual emissions, forecasted emissions for 2007 and 2009, and standards for 2014 and 2023.](image)
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