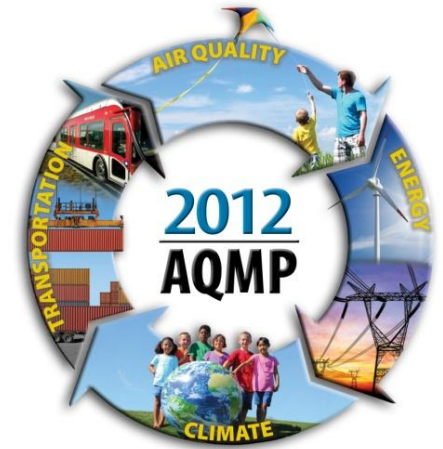




2012 Air Quality Management Plan



**DR. PHILIP FINE
SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT**

**REGIONAL PUBLIC HEARING
SEPTEMBER 11-13, 2012**

Cleaning The Air That We Breathe...

Background



- U.S EPA designated South Coast Air Basin non-attainment for 24-hour PM_{2.5} - 2009
- 24-hour PM_{2.5} SIP due – Dec 2012
- 8-hour ozone SIP approved – 2011
 - ❑ Includes over 200 tons/day NO_x reductions to be adopted by 2020 for full implementation by 2023



Key Pollutants

- **Fine Particles (PM_{2.5})**

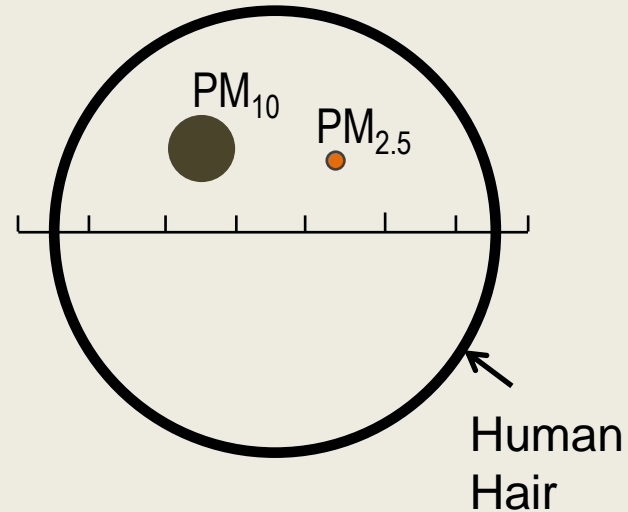
- Building Blocks

- ✦ SO_x, PM_{2.5}, NO_x, VOC, Ammonia

- **Ozone (summer smog)**

- Building Blocks

- ✦ VOC, NO_x



Key Objectives



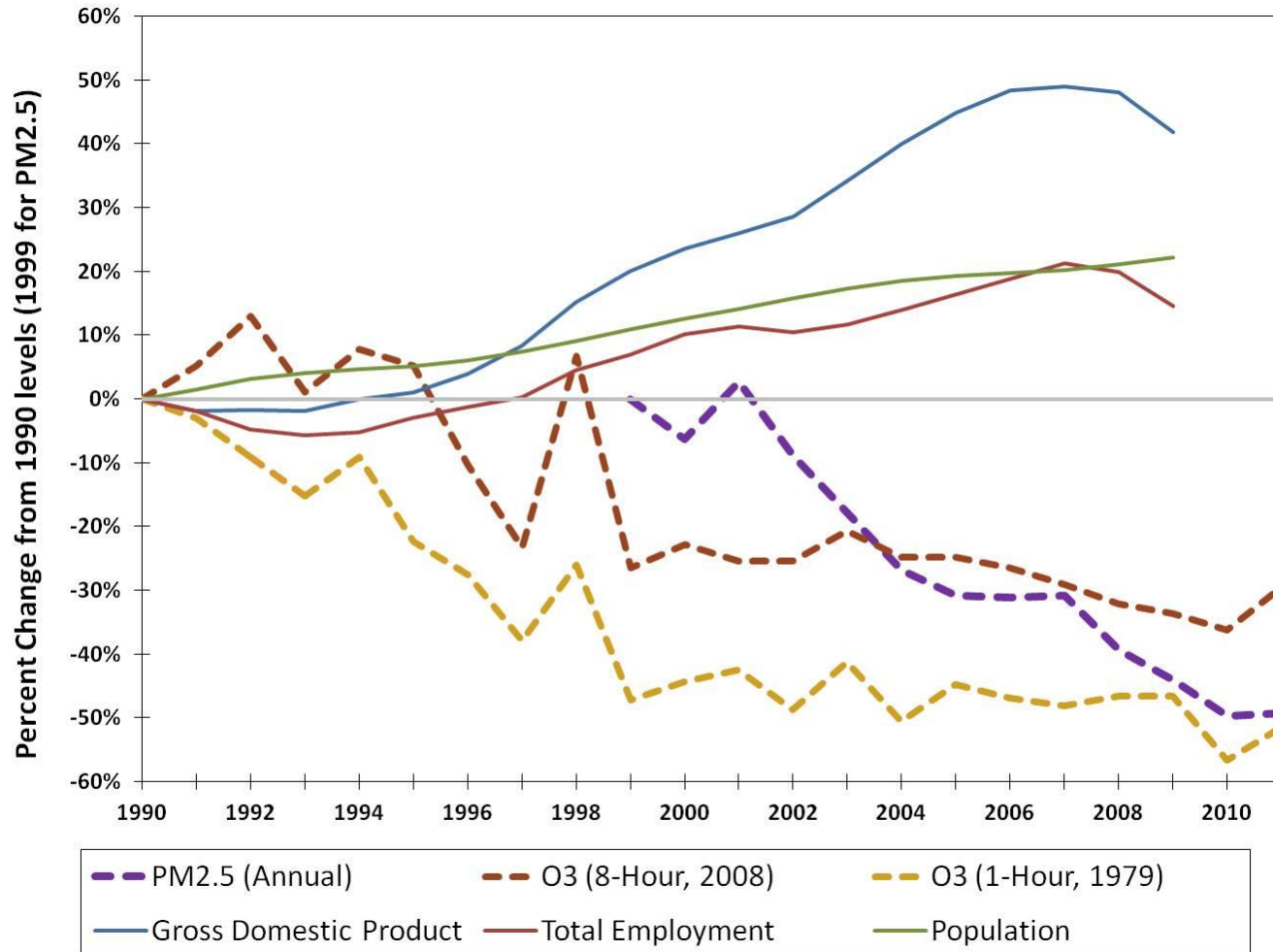
- **Meet 24-Hr PM2.5 Standard**
 - ❑ Earliest feasible date
 - ❑ Attainment demonstration
 - Maximize co-benefits
 - ❑ Contingency requirements
- **Partially Fulfill 2007 AQMP Ozone SIP Commitment**
 - ❑ Integrated approach to maximize co-benefits

Key AQMP/SIP Elements

- **PM Health Effects (CA H&SC)**
- **Base-year and Projected Emissions Inventories**
- **RACT / RACM**
- **Control Strategy**
- **Attainment Demonstration**
- **Contingency Measures**
- **Transportation Budgets**



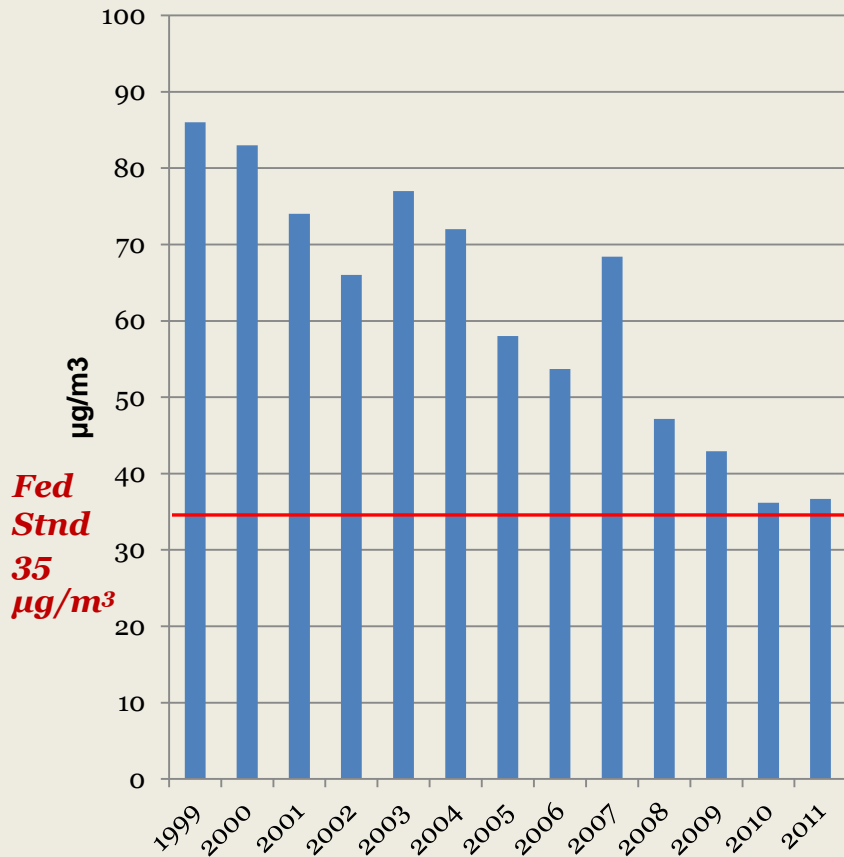
Air Quality/Demographic Trends



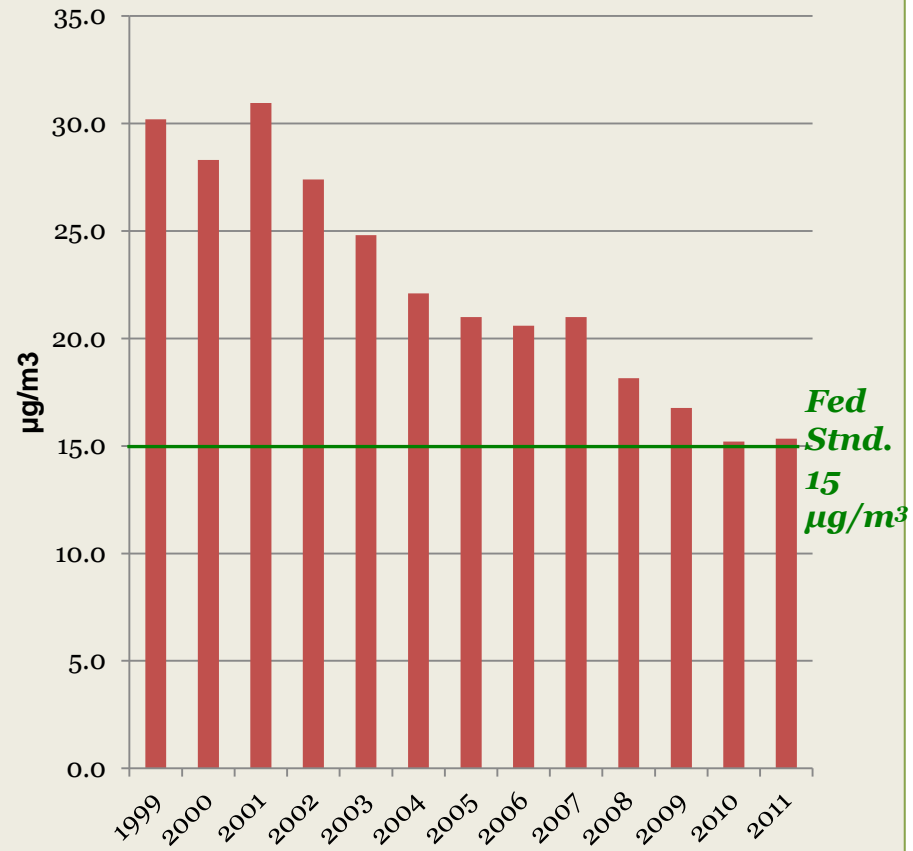
PM2.5 Air Quality



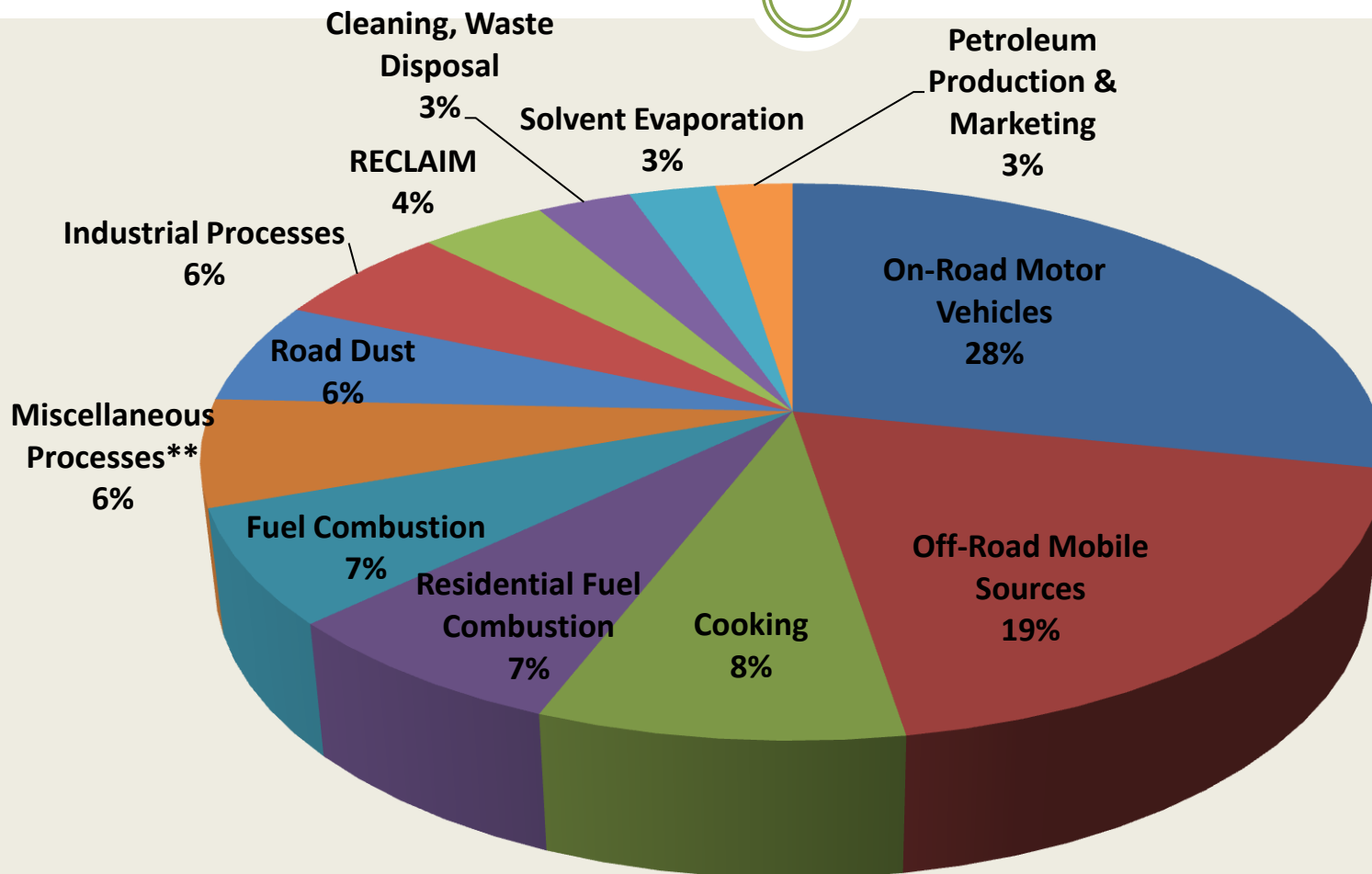
PM2.5 24-hour 98th Percentile



PM2.5 Annual Average



Sources of PM2.5*



*2014 emission inventory based on PM2.5 formation potential (incl. precursors)

** Includes construction/demolition, farming operations, fires, waste burning/disposal

Proposed PM2.5 Control Measures



- **Measures to Achieve Attainment by 2014:**
 - ❑ Episodic residential wood burning curtailment
 - ❑ Episodic open burning curtailment

Reductions: 12 tpd PM2.5



Proposed PM2.5 Control Measures – *continued*



- **Measures to Ensure Attainment:**
 - ❑ Backstop measure for Indirect Sources from Ports and Port-related Sources
 - ❑ Under-fired Charbroilers (2 phases)
 - ❑ Livestock Waste (2 phases)
 - ❑ Education, Outreach and Incentives
 - ❑ All Feasible Measures (state/federal requirement)

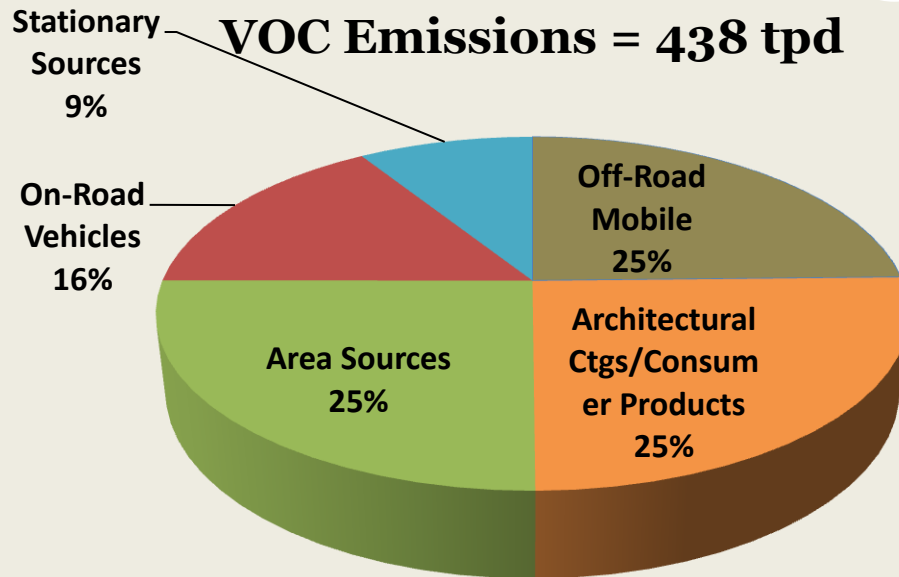
Contingency Measures

- Beyond those needed for attainment, OR
- Automatically triggered if attainment not achieved
- Measures designated for contingency
 - ❑ Residential wood burning curtailment (3.7 tpd PM2.5)
 - ❑ Open burning curtailment (2.4 tpd PM2.5)
 - ❑ NOx reductions from RECLAIM (2 tpd NOx)
- **Total = 87 tpd NOx equivalent**

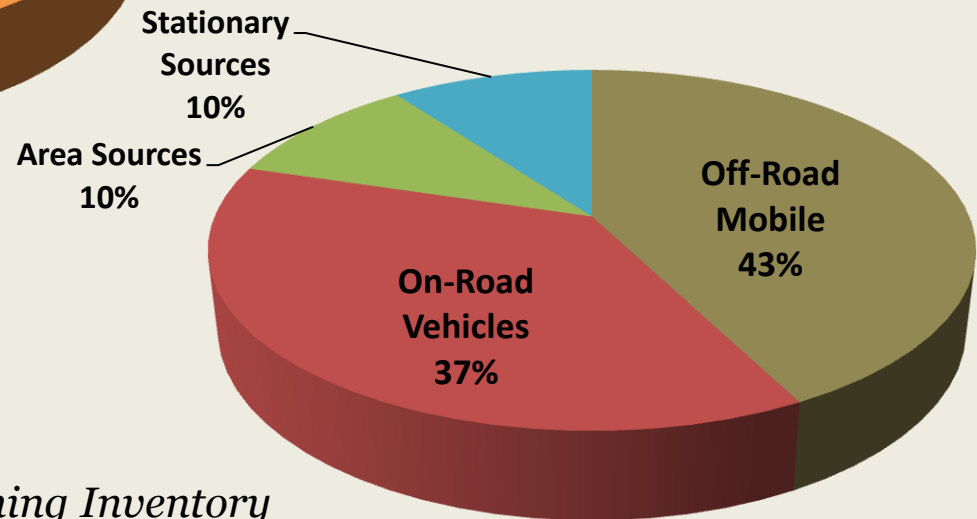


Sources of Ozone*

VOC Emissions = 438 tpd



NOx Emissions = 313 tpd

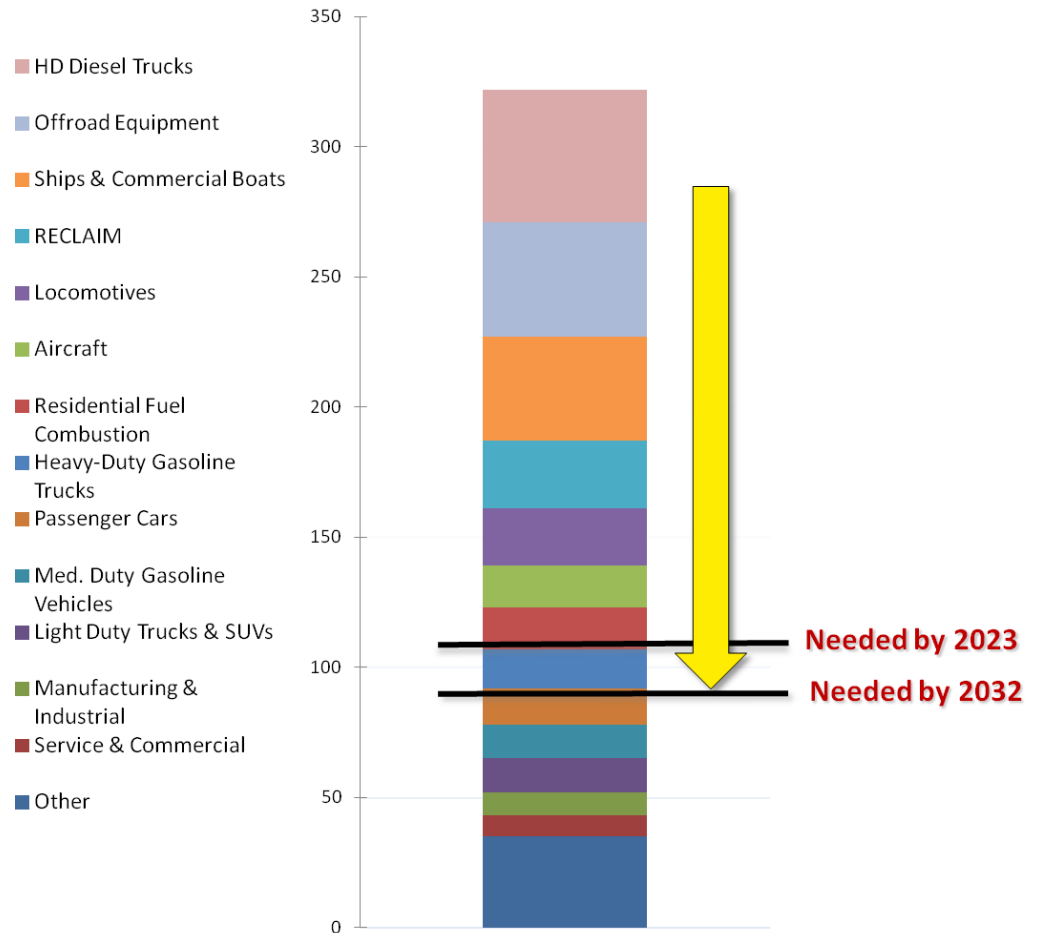


* Year 2023 emissions – Summer Planning Inventory

Emissions Reductions to Meet the Ozone Standards

Nitrogen Oxides Emissions in 2023 with Adopted Standards

Additional Needed Emission Reductions



Section 182(e)(5) Ozone Measures

- **Stationary Source Measures:**

- ❑ NOx RECLAIM (Phase II)
- ❑ Coatings, solvents, lubricants, adhesives
- ❑ Mold release products
- ❑ Landfill flares, commercial space heating
- ❑ Truck venting, propane gas refueling
- ❑ Leak detection and repair programs
- ❑ Greenwaste processing (chipping and grinding)
- ❑ Improve start-up, shutdown procedures
- ❑ Incentives, educational programs

- **Reductions: ~6 tpd VOC; ~1 tpd NOx**



Section 182(e)(5) Ozone Measures



- **Mobile On-Road:**

- ❑ Accelerated penetration of zero and near-zero emission vehicles
- ❑ Early retirement of older vehicles
- ❑ Reduce emissions from near-dock railyards



- **Mobile Off-Road:**

- ❑ Extension of SOON provision
- ❑ Incentives to further reduce emissions from marine vessels
- ❑ Regulation to further reduce emissions from locomotives

- **Action for Advanced Control Technologies:**

- ❑ Research & development, demonstrations, incentives

- **Reductions: ~21 tpd NOx**

Comments on Draft Plan



- **Major comments within first 45-days of review**
 - ❑ SIP commitment for 8-hour ozone control measures
 - ❑ Is there a need for VOC controls?
 - ❑ Removal of consumer product LVP exemption
 - ❑ Phase I of NO_x RECLAIM shave
 - ❑ Compressed schedule



Revised Draft Plan



- **Changes to the Draft Plan**

- ❑ Baseline inventory refinements
- ❑ General conformity – set aside
- ❑ Credit taken for funded mobile source incentive projects already under contract
- ❑ NO_x RECLAIM – shifted to a contingency measure
- ❑ Contingency measures – tpd reductions (per EPA)
- ❑ Transportation conformity – inter-pollutant flexibility

Socioeconomic Analysis



- Costs of Control Measures
 - Capital, Installation, Operation & Maintenance
 - Including Voluntary/Incentive Measures
 - Cost to Public & Private Sectors and Consumers by Year till 2035
- Benefits of Clean Air (PM2.5)
 - Health, Visibility & Material Benefits
- Job, Price, Competitiveness & Community Impacts
- CEQA Alternatives



Socioeconomic Analysis

(preliminary results)



- Total Cost of 2012 AQMP = \$448 Million
 - PM2.5 Strategy = \$326.6 Million
 - SCAG TCMs = \$326.4 Million
 - Others = \$0.2 Million
 - Ozone Strategy = \$122 Million
 - Stationary Sources = \$40 Million
 - Mobile Sources = \$82 Million



Socioeconomic Analysis

(preliminary results)



- Total Benefit of 2012 AQMP = \$10,670 Million
 - ❑ Reduction in Mortality = \$2,225 Million
 - ❑ Reduction in Morbidity = \$23 Million
 - ❑ Visibility Improvement = \$696 Million
 - ❑ Reduced Material Damage = \$14 Million
 - ❑ Congestion Relief = \$7,712 Million



Socioeconomic Analysis

(preliminary results)



JOB IMPACTS

- ❑ Control measures: - 3257
 - SCAG: - 1611
 - District PM2.5: - 4
 - Ozone Strategy: -1639
- ❑ Air Quality Benefits: +42,174

- ❑ Total Net Job Impacts: +37,043



Environmental Analysis



- **Program Environmental Impact Report**

- ❑ Released for 45-day public comment period on: September 7, 2012
- ❑ All PM2.5, ozone, & contingency CMs analyzed for potential adverse environmental impacts
- ❑ Nine environmental topic areas analyzed:
 - Aesthetics; air quality; energy; hazards/hazardous materials; hydrology/water quality; land use, noise, solid/hazardous wastes, & transportation/traffic
- ❑ Impacts concluded to be less than significant for:
 - Aesthetics, land use, & solid/hazardous wastes



Environmental Analysis (Continued)



- **Program Environmental Impact Report**

- Impacts concluded to be significant for:

- Construction air quality, energy (electricity & natural gas demand), hazards/hazardous materials, water demand, construction noise, & transportation/traffic

- Mitigation measures identified for all significant environmental topics:

- Mitigation measures reduce to less than significant hazards associated with coatings flammability & accidental releases of ammonia
- Impacts of an accidental release of LNG during transport remain significant
- In spite of mitigation measures identified for other environmental topics, impacts remain significant



Environmental Analysis (*Continued*)



- **Program Environmental Impact Report**

- ❑ Four project alternatives identified & impacts compared to the 2012 AQMP impacts
- ❑ Alternative 1 – No Project (Continued implementation of the 2007 AQMP)
 - No significant adverse impacts
 - Meets 3 of the 11 project objectives
- ❑ Alternative 2 – PM2.5 Plan with localized CMs that apply only to Mira Loma
 - Impacts comparable, but generally less than those for the 2012 AQMP
 - Meets most of the 11 project objectives, but localized PM2.5 measures not as effective as the 2012 AQMP
- ❑ Alternative 3 – Greater reliance on NOx emission reductions
 - Impacts comparable, but generally greater than those for the 2012 AQMP
 - Doesn't meet CEQA requirement to reduce impacts
- ❑ Alternative 4 – PM2.5 only CMs
 - Impacts comparable, but much less than those for the 2012 AQMP
 - Meets 7 of the 11 project objectives



Environmental Analysis *(Continued)*



- **Program Environmental Impact Report**

- ❑ Comment period ends October 23, 2012
- ❑ Final Program EIR will consist of:
 - Responses to all comments received on the Draft Program EIR
 - Changes to the document based on, public comment or other 2012 AQMP modifications
- ❑ Significant adverse environmental impacts & mitigation measures require:
 - Findings (of significant impacts)
 - Statement of Overriding Considerations (why benefits outweigh impacts)
 - Mitigation Monitoring & Reporting Plan (identification of who is responsible for implementing & monitoring implementation of mitigation measures)



Recent EPA Actions



- **Proposed 1-hour ozone SIP call**
- **Proposed disapproval of VMT emissions offset demonstrations – 8-hr and 1-hr plans**
- **EPA's guidance to offset growth in emissions due to growth in VMT**



Next Steps



- **Document Release**
 - ❑ Revised Draft AQMP (Sept 7)
<http://www.aqmd.gov/aqmp/2012aqmp/index.htm>
 - ❑ Draft Program EIR (Sept 7)
 - ❑ Socioeconomic Report (Late Sept)
- **Continue outreach efforts**
- **Regional hearings:** Sept. 11-13
- **Adoption Hearing:** November - December
- **Submit to CARB for approval**
- **SIP Submittal to EPA** – December 2012 deadline

