Local Stationary/ Area-wide Measures

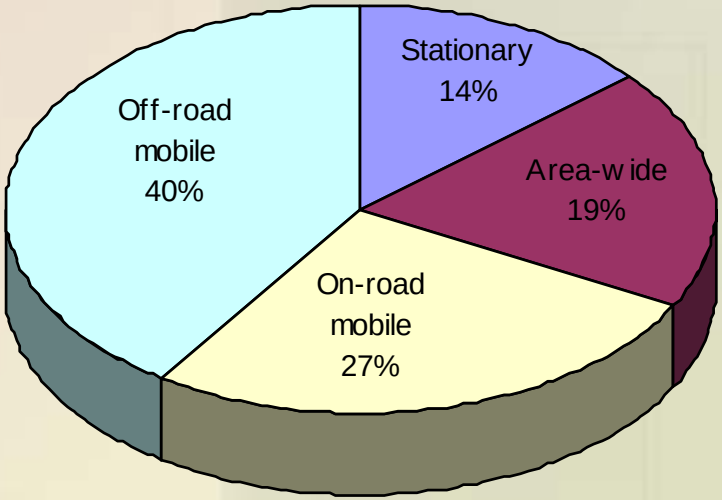
PCAPCD

Overview

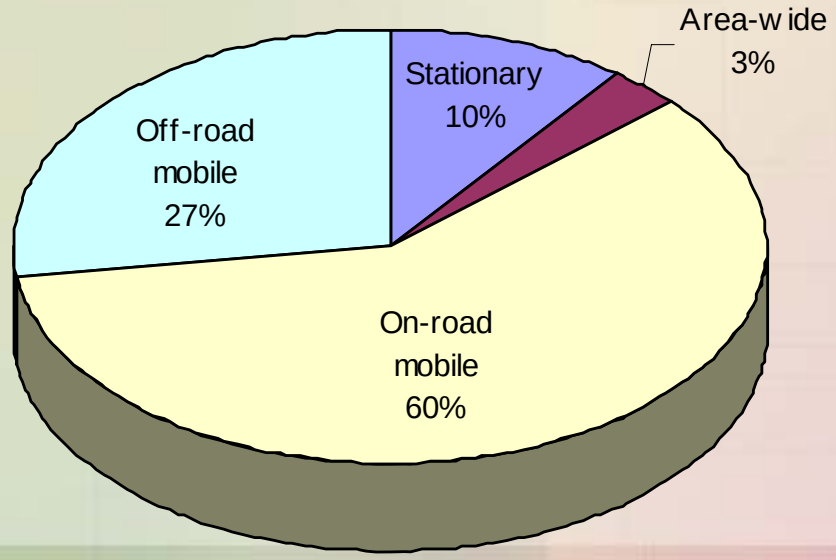
- **Current Ozone Precursor Emissions In Placer County**
- **Proposed Stationary/Area-Wide Measures in Placer County**
- **Questions\Comments**

2005 Placer County Ozone Precursor Emission Inventory

ROG Emissions (35 tpd)

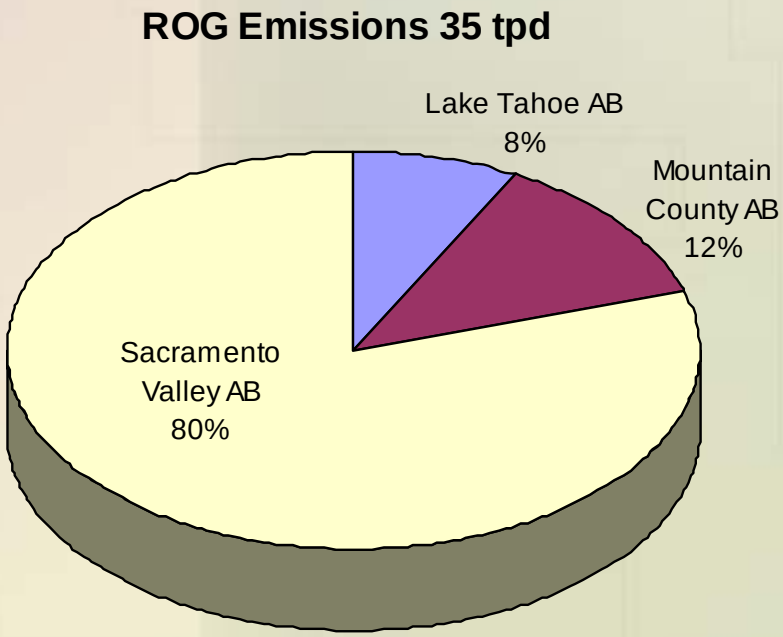


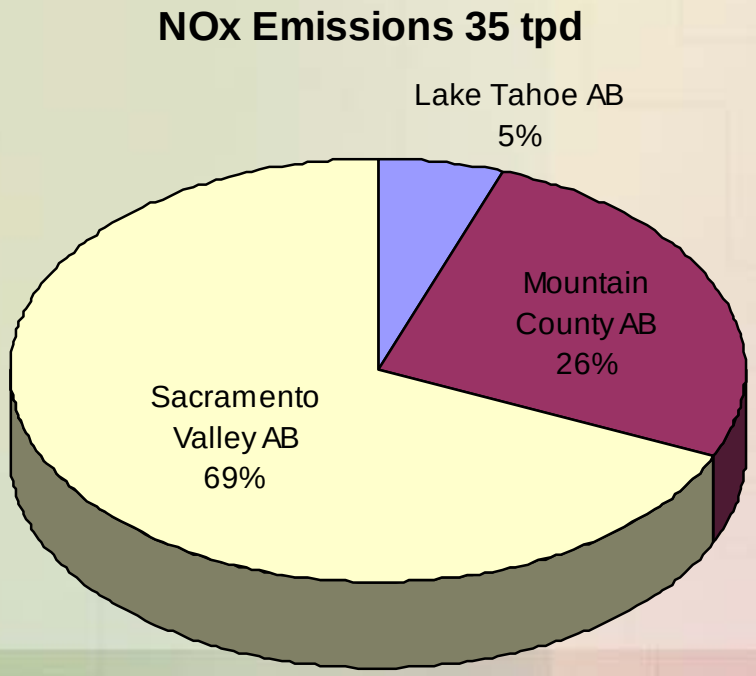
NOx Emissions (35 tpd)



Total ROG+NOx=70 tpd

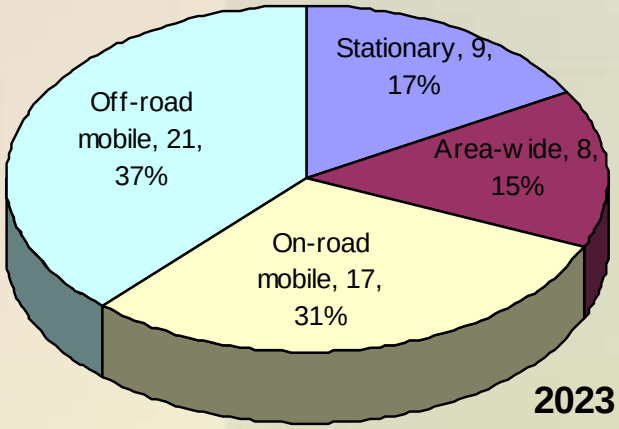
2005 Placer County Ozone Precursor Emission Inventory (Cont.)



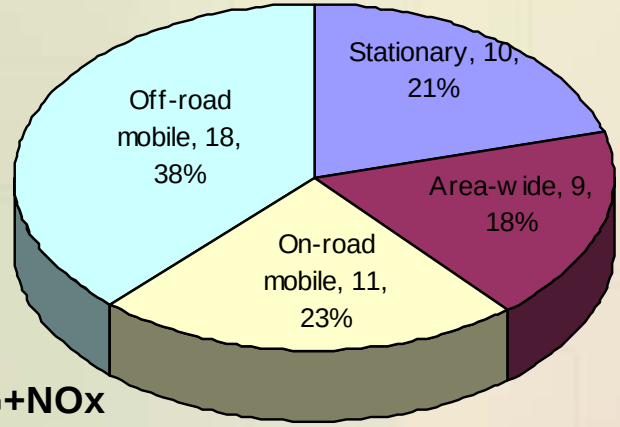


Placer County Ozone Precursor Emission Forecast

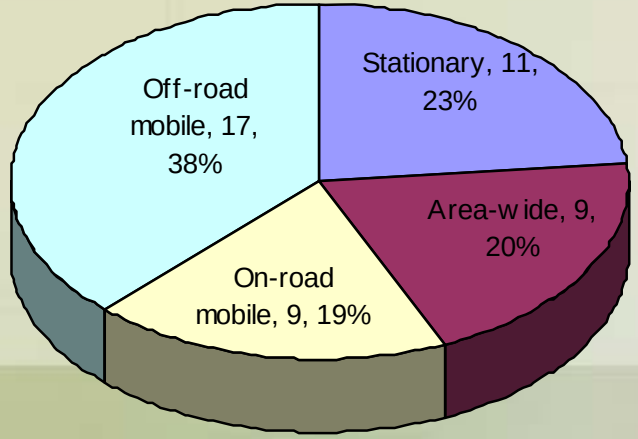
2012 Placer County ROG+NOx
56 tpd



2018 Placer County ROG+NOx
48 tpd



2023 Placer County ROG+NOx
45 tpd



Regional List of Local Stationary/ Area-wide Measures

Pollutant	Control Measure	Districts Adopting
VOC	**Architectural Coatings**	All
VOC	**Automotive Refinishing**	SMAQMD, FRAQMD, PCAPCD, YSAQMD
VOC	Degreasing/Solvent Cleaning	SMAQMD, EDCAQMD, FRAQMD, YSAQMD
VOC	Graphic Arts	YSAQMD
VOC	Natural Gas Production	SMAQMD
VOC	Unspecified Coating	SMAQMD, EDCAQMD
NOx	**Asphalt Concrete**	SMAQMD, PCAPCD
NOx	Boilers and Process Heaters	YSAQMD
NOx	IC Engines	SMAQMD, FRAQMD, YSAQMD
NOx	**Water Heaters**	All

Stationary/Area-wide Measures – Architectural Coatings

- Baseline emissions in the Sacramento Region, in 2012
  - 7.4 tpd VOC
- Affected sources
  - do-it-yourself consumers,
  - Construction trades people including:
    - Painting contractors,
    - Cabinet refinishers
    - Flooring contractors
    - Swimming pool painters
    - Roadway striping companies
    - Concrete workers
    - Roofers
    - Deck and fencing manufacturers or installers
  - Industrial and commercial maintenance operations
  - Manufacturers and distributors of paints, wood product coatings, and other surface coating materials

Stationary/Area-wide Measures – Architectural Coatings

- Proposed changes include lowering VOC content for following coating categories:
  - Flat and Nonflat – high gloss
  - Antenna, Antifouling, and Flow Coatings
  - Clear Wood Coatings (Lacquers/Sanding Sealers/Varnishes)
  - Floor Coatings
  - Primers, Sealers, and Undercoaters (including Quick-Dry and Specialty)
  - Quick-Dry Enamels
  - Roof Coatings
  - Stains, Opaque
  - Temperature-Indicator Safety Coatings
  - Traffic Marking Coatings
  - Waterproofing Sealers (including concrete/masonry sealers)
- Cost or Cost Effectiveness
  - Estimated overall cost effectiveness is $11,612/ton - $16,996/ton

Stationary/Area-wide Measures – Architectural Coatings

- Schedule

District	Adoption	Implement
Placer	2012	2013

- Emission Reductions

VOC, tons per day		
2012	2018	2023
0.98	1.27	1.39

Stationary/Area-wide Measures – Automotive Refinishing

- Baseline emissions in the Sacramento Region, in 2012
  - 1.3 tpd VOC

- Affected sources include
  - Refinishing operations (individuals and commercial shops):
    - passenger cars, pickup trucks and sport utility vehicles
    - buses and commercial truck cabs and chassis,
    - motorcycles,
    - military vehicles, or mobile equipment,
  - Retailers and wholesalers of automotive refinishing products

Stationary/Area-wide Measures – Automotive Refinishing

- Proposed changes from implementing CARB's 2005 SCM include
  - Lower VOC coating for most coatings by:
    - Consolidate the limits for cars, trucks and motorcycles with the limits for buses, military vehicles and mobile equipment
    - Eliminate the multistage topcoat system and replace with VOC limits for color and clear coats
    - Consolidate the limits for precoat, primers, primer sealers and primer surfacers
    - Eliminate the specialty coating category and replace with specific limits
    - Set lower VOC limits for adhesion promoters, pretreatment coatings, single-stage coatings, and underbody coatings
    - Set lower VOC standards for surface preparation and equipment cleanup
- Cost or Cost Effectiveness
  - Overall cost effectiveness based on the SCM is $2,860/ton - $11,637/ton
    - CARB staff estimated that if all of the costs are passed on to the consumer the average price of a repair would increase $11

Stationary/Area-wide Measures – Automotive Refinishing

- Schedule

District	Adoption	Implement
Placer	2015	2017

- Emission Reductions

VOC, tons per day		
2012	2018	2023
0. 21	0.28	0.29

Stationary/Area-wide Measures – Asphalt Concrete

- Baseline emissions in the Sacramento Region, in 2012
  - 0.313 tpd NOx
- Affected sources
  - Asphalt concrete (hot-mix pavement material) facilities that heat aggregate in a rotary dryer

Stationary/Area-wide Measures – Asphalt Concrete

- Proposed measure will
  - Establish a NOx limit of 30 - 36 ppm for the dryer burner
    - This limit can be met with the use of a low NOx burner with flue gas recirculation

- Cost or Cost Effectiveness
  - Estimated overall cost effectiveness is $5,675/ton - $17,417/ton

Stationary/Area-wide Measures – Asphalt Concrete

- Schedule

District	Adoption	Implement
Placer	2013	2014

- Emission Reductions

NOx, tons per day		
2012	2018	2023
0.12	0.18	0.20

Stationary/Area-wide Measures – Water Heaters

- Baseline emissions in the Sacramento Region, in 2012
  - 2.24 tpd NOx
- Affects:
  - Manufacturers and distributors of new devices
    - Commercial and industrial water heaters and boilers, and
    - Residential water heaters
  - New or replacement fuel fired water heaters installed in:
    - Homes
    - Hospitals
    - Schools
    - Laundering facilities
    - Apartment buildings
    - Office buildings
    - Swimming pools
    - Restaurants

Stationary/Area-wide Measures – Water Heaters

- Establish point of sale requirements consistent with SCAQMD limits for water heaters <1 mmBTU/hr
  - <75,000 Btu/hr – 15 ppm
  - 75,000 – 400,000 BTU/hr – 20 ppm
  - 400,000 – 1 mmBTU/hr – 20 ppm

- Cost or Cost Effectiveness
  - Estimated unit cost increase is zero to $3,000
  - Estimated overall cost effectiveness is $1,354/ton - $11,957/ton

Stationary/Area-wide Measures – Water Heaters

- Schedule

District	Adoption	Implement
Placer	2015	2018

- Emission Reductions

NOx, tons per day		
2012	2018	2023
0.47	1.31	1.54

Regional List of Local Stationary/ Area-wide VOC Measures

Measure	SMAQMD Adoption	EDCAQMD Adoption	FRAQMD Adoption	PCAPCD Adoption	YSAQMD Adoption	VOC 2018
Architectural Coatings	2010	2010	<2012	2012	2010	1.27
Automotive Refinishing	2008	-	2016	2015	2008	0.28
Degreasing/Solvent Cleaning	2007	2011	<2012	-	2007	1.11
Graphic Arts	-	-	-	-	2008	0.08
Natural Gas Processing	2008	-	-	-	-	0.12
Unspecified Coatings	2008	2007	-	-	-	0.20
Total VOC Emission Reduction Benefits, tons/day						3.06

Regional List of Local Stationary/ Area-wide NOx Measures

Measure	SMAQMD Adoption	EDCAQMD Adoption	FRAQMD Adoption	PCAPCD Adoption	YSAQMD Adoption	NOx 2018
Asphalt Concrete	2010	-	-	2013	-	0.18
Boilers, Steam Generators and Process Heaters	-	-	-	-	2007	0.08
IC Engines	2008	-	2010	-	2009	0.15
Water Heaters	2008	2015	2016	2015	2008	1.31
Total NOx Emission Reduction Benefits, tons/day						1.72

Questions & Comments