

Passenger Vehicle Strategy

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2007 SIP Symposium

**We will
discuss....**

- **Sources and Emissions**
- **Existing Program**
- **Anticipated Reductions**
- **Concepts**
 - **Smog Check**
 - **Vehicle Retirement**
 - **Motorcycle Standards**
 - **Gasoline Modifications**



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Sources and Emissions



- **Passenger Vehicles account for 33 percent of ROG and 22 percent of NOx emissions statewide in 2005**
- **Passenger Vehicles include: cars, light trucks, SUVs, minivans, motorcycles**



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Existing Passenger Vehicle Programs

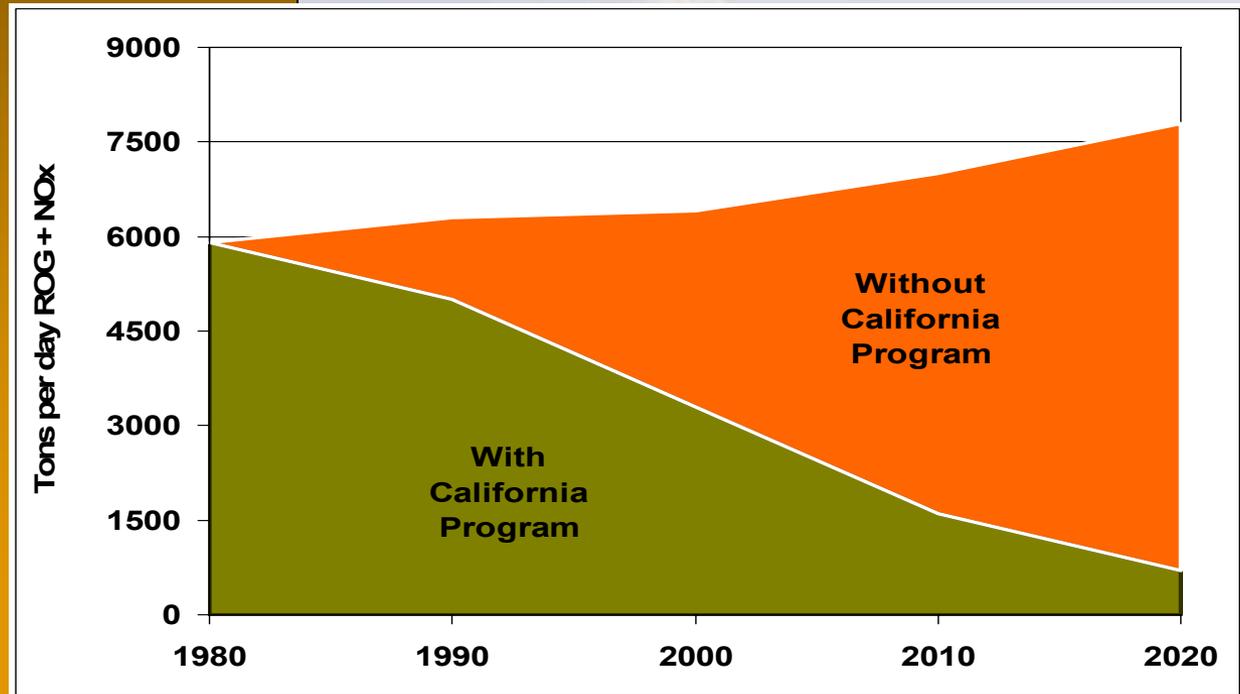
- **New vehicle emissions standards**
- **Cleaner Fuel**
- **On-board diagnostics**
- **Smog Check**



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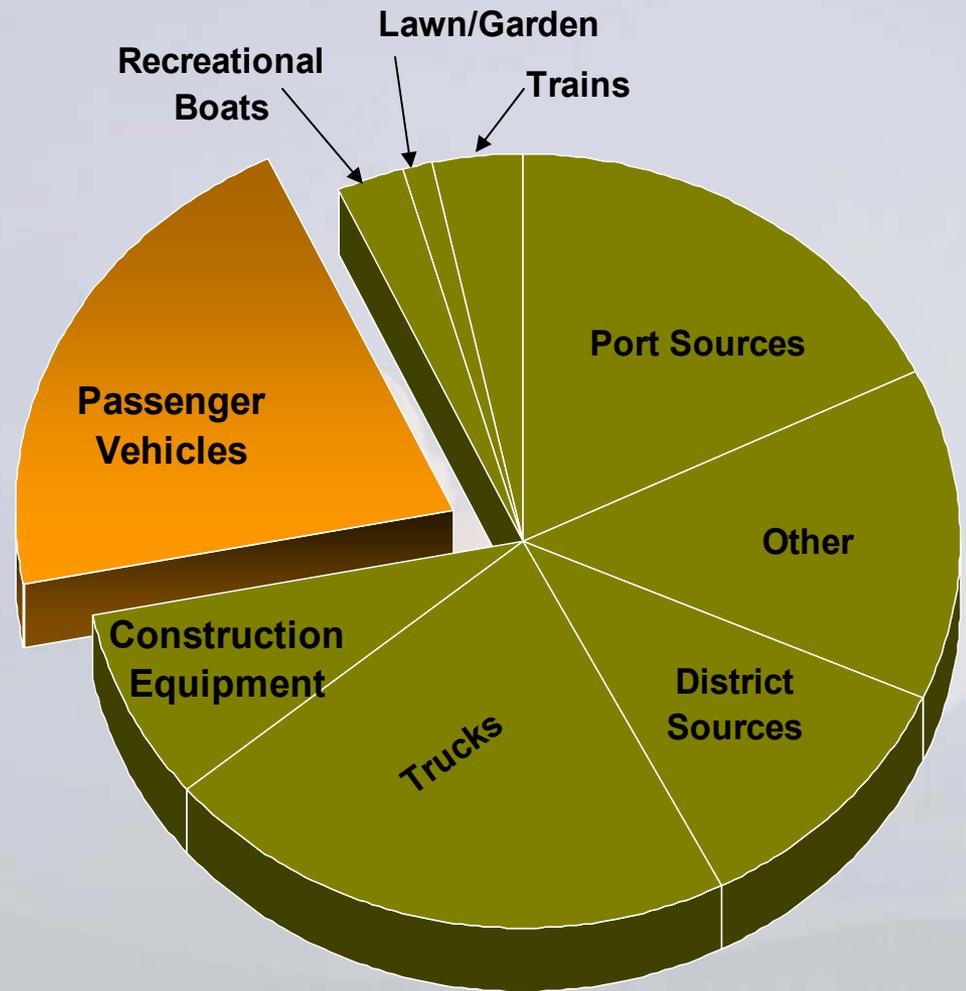
Existing Programs are Successful

On-Road Motor Vehicles



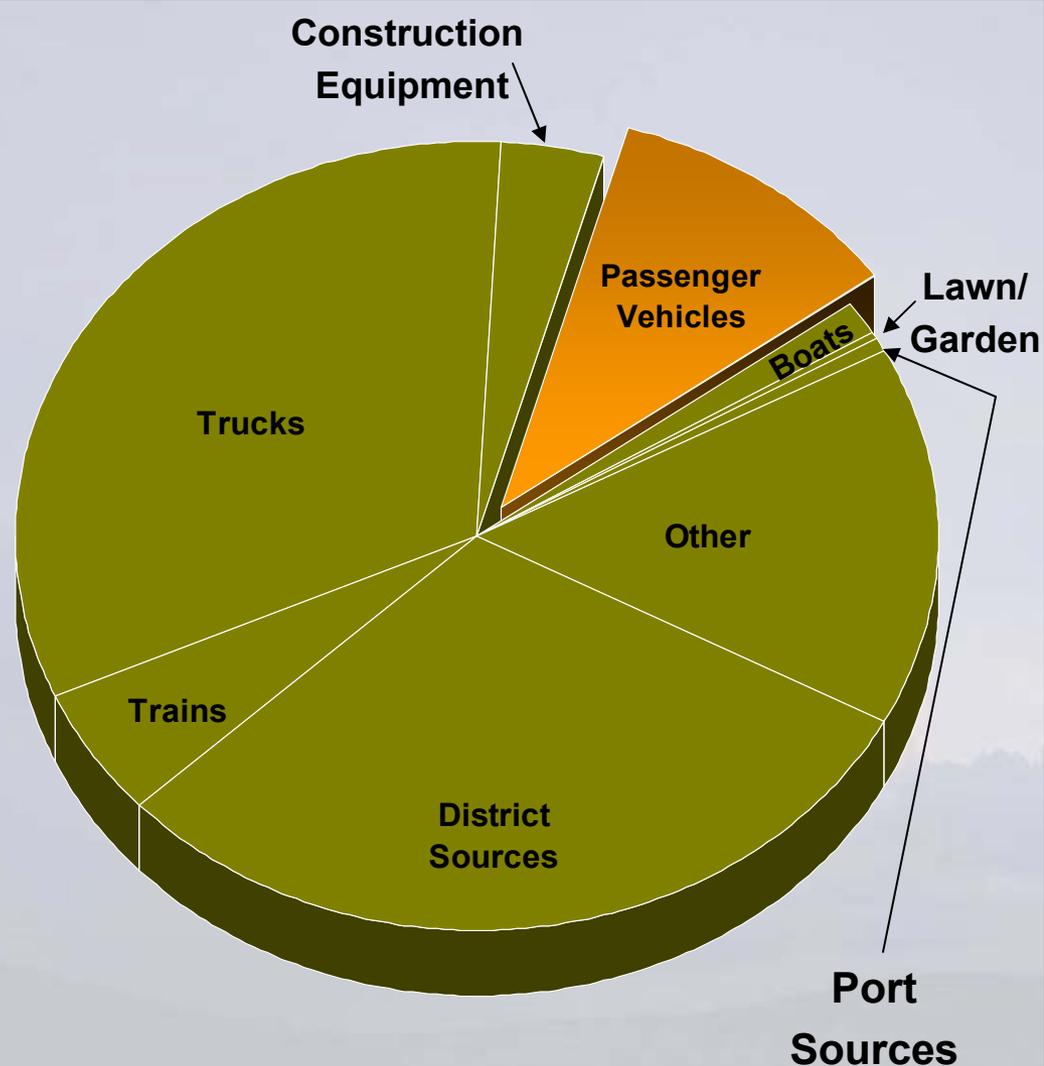
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South Coast 2015 NOx Baseline inventories



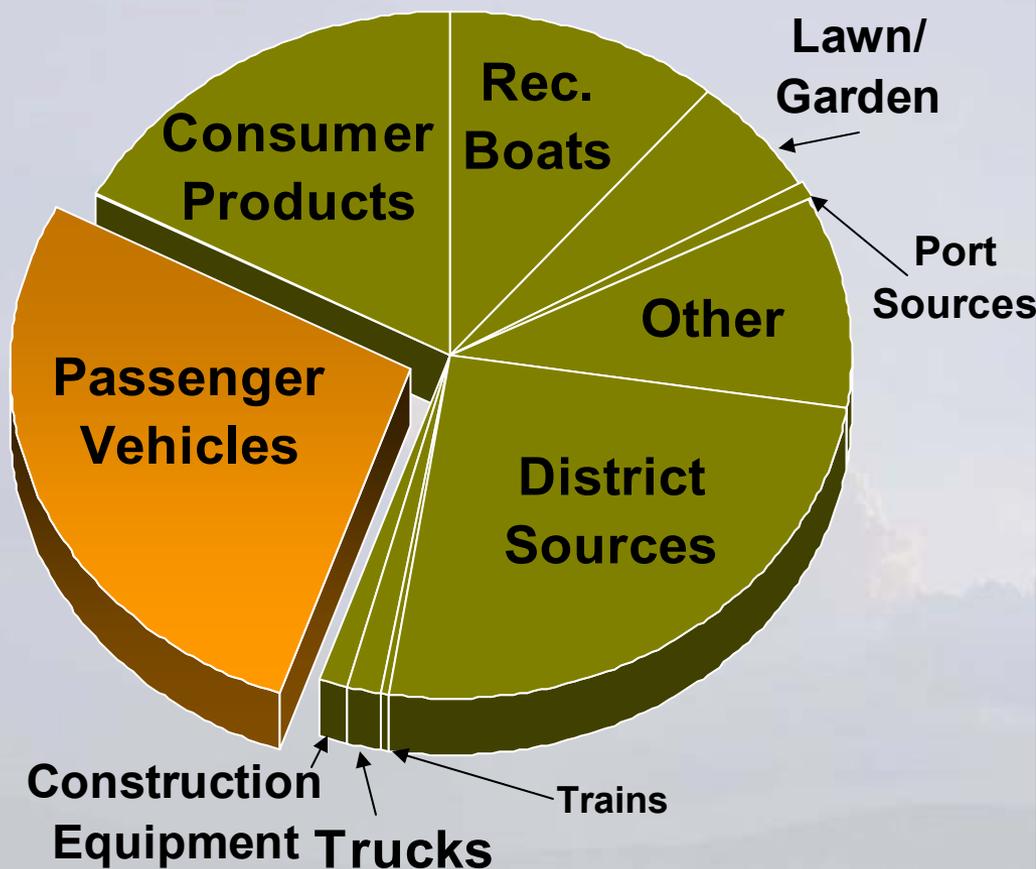
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San Joaquin Valley 2015 NOx



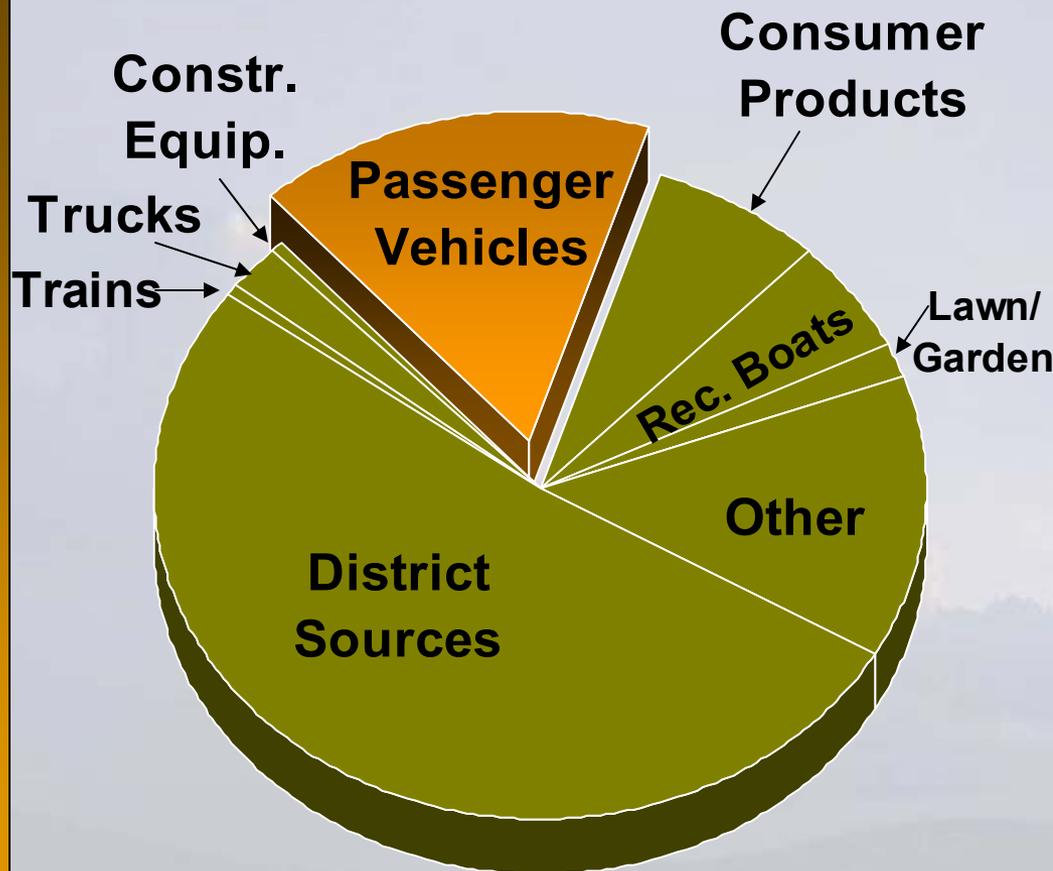
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South Coast 2015 ROG



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San Joaquin Valley 2015 ROG



Port sources are 0.1%



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Passenger Vehicle Baseline Emissions

South Coast Air Basin

	Tons Per Day		
	1990	2005	2015*
NOx	707	302	148
ROG	882	333	173
PM 2.5	4.6	6.4	7.3

* 2014 emissions reflect 2015 attainment year



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Passenger Vehicle Baseline Emissions

San Joaquin Valley Air Basin

	Tons Per Day		
	1990	2005	2015*
NOx	146	78	45
ROG	197	98	62
PM 2.5	0.9	1.4	1.8

* 2014 emissions reflect 2015 attainment year



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Smog Check Program

- **Required by federal law**
- **Key component of the SIP**
- **Current program achieves significant ROG+NO_x benefits in 2015: 151 tpd South Coast and 47 tpd San Joaquin**
- **Assume current program kept intact**
- **These concepts provide substantial new opportunities for additional emission reductions**



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Smog Check Concepts

- **Low pressure evaporative test**
- **More stringent cut-points**
- **Annual inspections for older vehicles**
- **Annual inspections for high annual mileage vehicles**
- **Visible smoke test**
- **Add idle testing to current enhanced dyno test**
- **Inspection of light and medium duty diesels**
- **Inspection of motorcycles**



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Smog Check Concepts



- Combined these concepts reduce ROG by 16 tpd and NOX by 15 tpd in South Coast in 2015
- Concepts can be implemented by 2010
- Implementation will require regulatory action by BAR and some new legislation



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Expanded Voluntary Vehicle Retirement

- **BAR program goal is to scrap about 18,000 cars per year**
- **Proposed program**
 - **Failing and passing vehicles are eligible**
 - **Higher per vehicle incentive**
 - **Marginal vehicles could get catalyst replacement in lieu of retirement**
- **Potential reductions of 14.8 tpd ROG and 8.9 tpd NO_x in South Coast in 2015**



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Motorcycle Standards

- **New standards for large motorcycles began MY 2004**
- **Propose to further tighten standards by 50 percent for all new on-road motorcycles beginning 2013**
- **1.3 tpd ROG and 0.4 tpd NOX benefit in South Coast in 2015**



Gasoline Modifications

- **Ethanol used as oxygenate in CaRFG3**
- **Ethanol permeation results in high ROG evap emissions**
- **Proposing modifications to offset on-road permeation effects**
- **Up to 6.5 tpd ROG benefit in South Coast in 2015**



Impact of Passenger Vehicle Strategy

- **South Coast ozone season reductions in 2015**
 - 39 tpd ROG
 - 24 tpd NOX
- **San Joaquin Valley ozone season reductions in 2015**
 - 12 tpd ROG
 - 6 tpd NOX

