

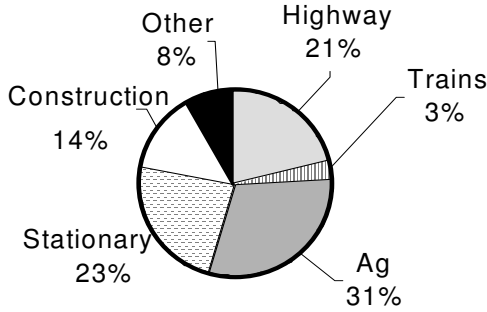
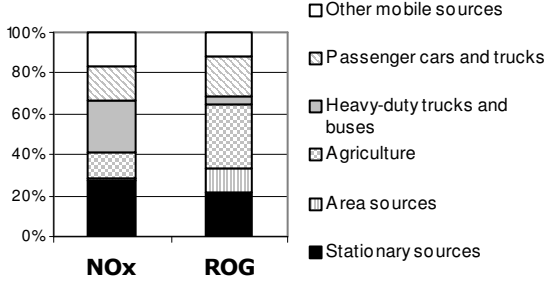
San Joaquin Valley Residents Breathe MOST DANGEROUS Air in the Country

- Bakersfield was designated the most ozone-polluted mid-sized city and Merced the most ozone-polluted small city in the United States in 2003 by the EPA.
- The entire San Joaquin Valley failed to meet federal health standards for fine particles in the air in 2004—pollution that causes illness and death from heart and lung disease.¹

Air Quality Indicators ²	South Coast Air Basin	San Joaquin Valley Air Basin
Days over state 1-hr ozone standard, 2003	125	137
Days over 8-hr national ozone standard, 2003	109	134
Daily vehicle miles traveled increase 1980-2000	100%	146%

Ozone in the SJV is often worse than in the Los Angeles area.

Where Does the Pollution Come From?

PARTICULATE MATTER (PM)	OZONE
<p>PM is directly emitted into the air or forms through reactions involving a variety of compounds including nitrogen oxides, sulfur oxides, and ammonia. PM is linked to premature death, decreased lung function, and aggravation of cardiac and pulmonary disease.</p>	<p>Ozone is not emitted directly to the air. It is formed through a reaction involving reactive organic gases (ROG) and oxides of nitrogen in the presence of sunlight. Ozone can cause asthma and permanent lung damage in otherwise healthy children.³</p>
 <p><i>Sources of Diesel PM, 2003</i></p>	 <p><i>Emissions of Ozone Precursors, 2003</i></p>
<p>Farming operations and highway trucks are large contributors to direct emissions of PM.</p>	<p>Agriculture⁴ and heavy-duty trucks and buses are the largest sources of ozone precursor emissions.</p>

¹ EPA state designations for PM 2.5--<http://www.epa.gov/pmdesignations/nonattainingreen.htm>

² 2004 California Almanac of Emissions and Air Quality available online at <http://www.arb.ca.gov/aqd/almanac/almanac04/almanac04.htm>

³ McConneell, et al, "Asthma in exercising children exposed to ozone: a cohort study," *The Lancet* 359:386-391, February 2, 2002.

⁴ Estimate of emissions from agriculture includes agricultural burning.



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

www.ucsusa.org/centralvalley.html

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