A decorative graphic consisting of a thin yellow circle on the left side. A thick black bracket is positioned on the left side of the circle, and a thick yellow bracket is on the right side. A horizontal bar with a light green-to-white gradient is placed across the middle of the circle, containing the title text.

Trucks and Air Quality in the San Joaquin Valley

Presentation to the Fresno COG TTC,
PAC, and Policy Board

June 27, 2005

[Summary]

- n Goods Movement
- n San Joaquin Valley Air Quality
- n Impact of Through Trucks
- n Updated Emissions Inventory
- n Resources
- n Thoughts

The San Joaquin Valley Interregional Road System



Estimated Average Annual Daily Truck Traffic

1998

2020



[Goods Movement]

- n Tonnage moved
 - i 73 million tons of commodities were shipped within and **from** the SJV
 - i 77 million tons were shipped **into** the SJV

- n Trucking is the dominant mode for goods movement
 - i 87% of outbound tonnage
 - i 81% of inbound tonnage
 - i 50% of the truck commodity movements (by tonnage) are intra-Valley

Top Commodities Shipped To, From, and Within California

Commodity	Value (billions \$)	
	<u>1998</u>	<u>2020</u>
Transportation Equipment	158	385
Food/Kindred Products	124	440
Machinery	113	432
Secondary Traffic	89	354
Instr/Photo Equip/Optical Equip	85	398

NOTE: Secondary traffic is defined as freight flows to and from distribution centers or through intermodal facilities.

[Heavy-Duty Vehicles]

n Definition

i Heavy Duty Trucks (HDT)

n GVW >14,000 pounds

i Heavy-Heavy Duty Trucks (HHDT)

n GVW >33,000 pounds

i Dominated by diesel

n Better mileage than traditional gasoline engines

n Diesel engines typically last much longer than gasoline engines

n Estimated 2%-4% of on-road fleet in CA

i Yet,

n Over 40% of NO_x from on-road vehicles

n 50% of PM from on-road vehicles

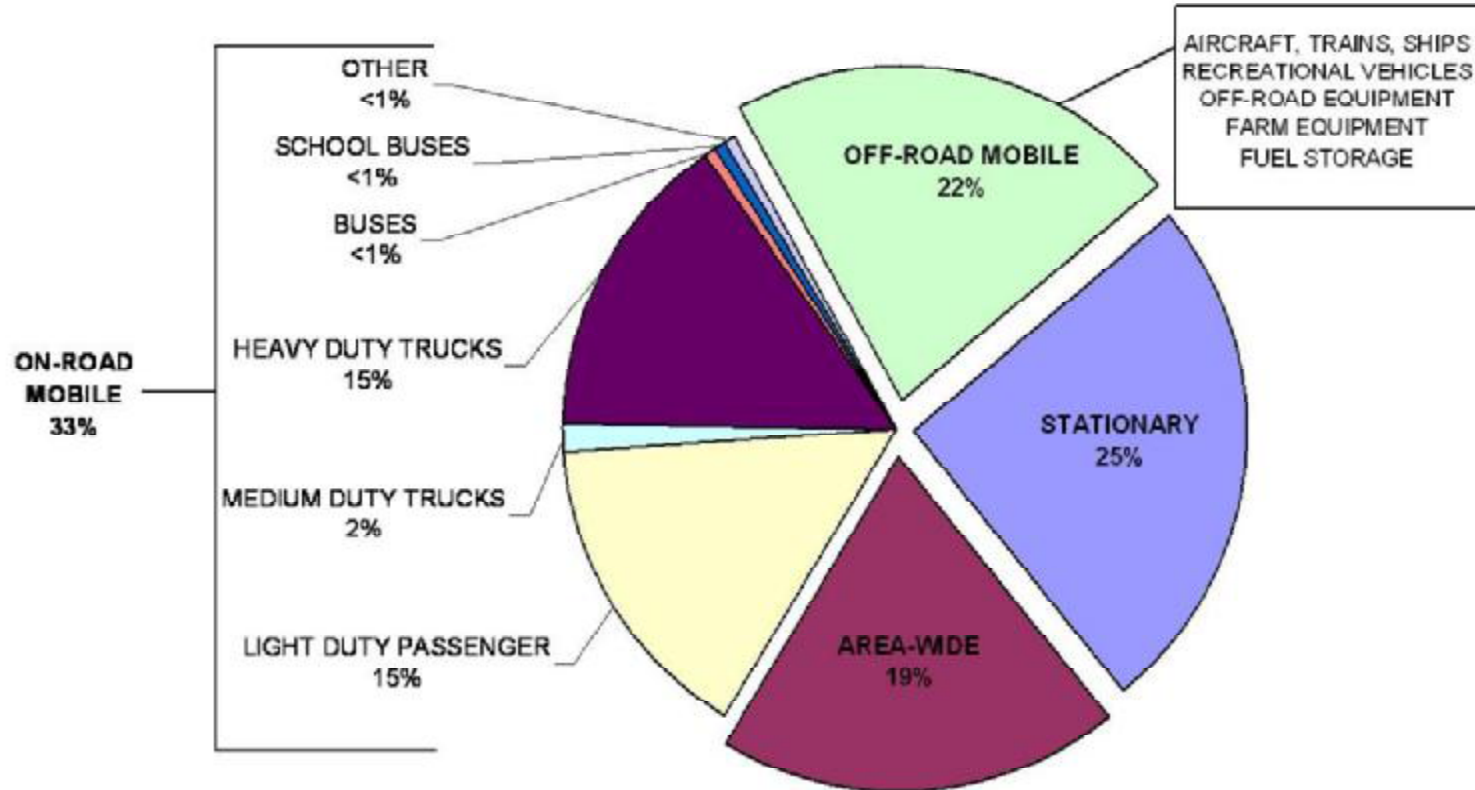
[Truck Travel]

- n Statewide Distribution of HHDT VMT
 - n Los Angeles – 11%
 - n Kern – 10.2 %
 - n San Bernadino – 9.6%
 - n Fresno County – 5.5%

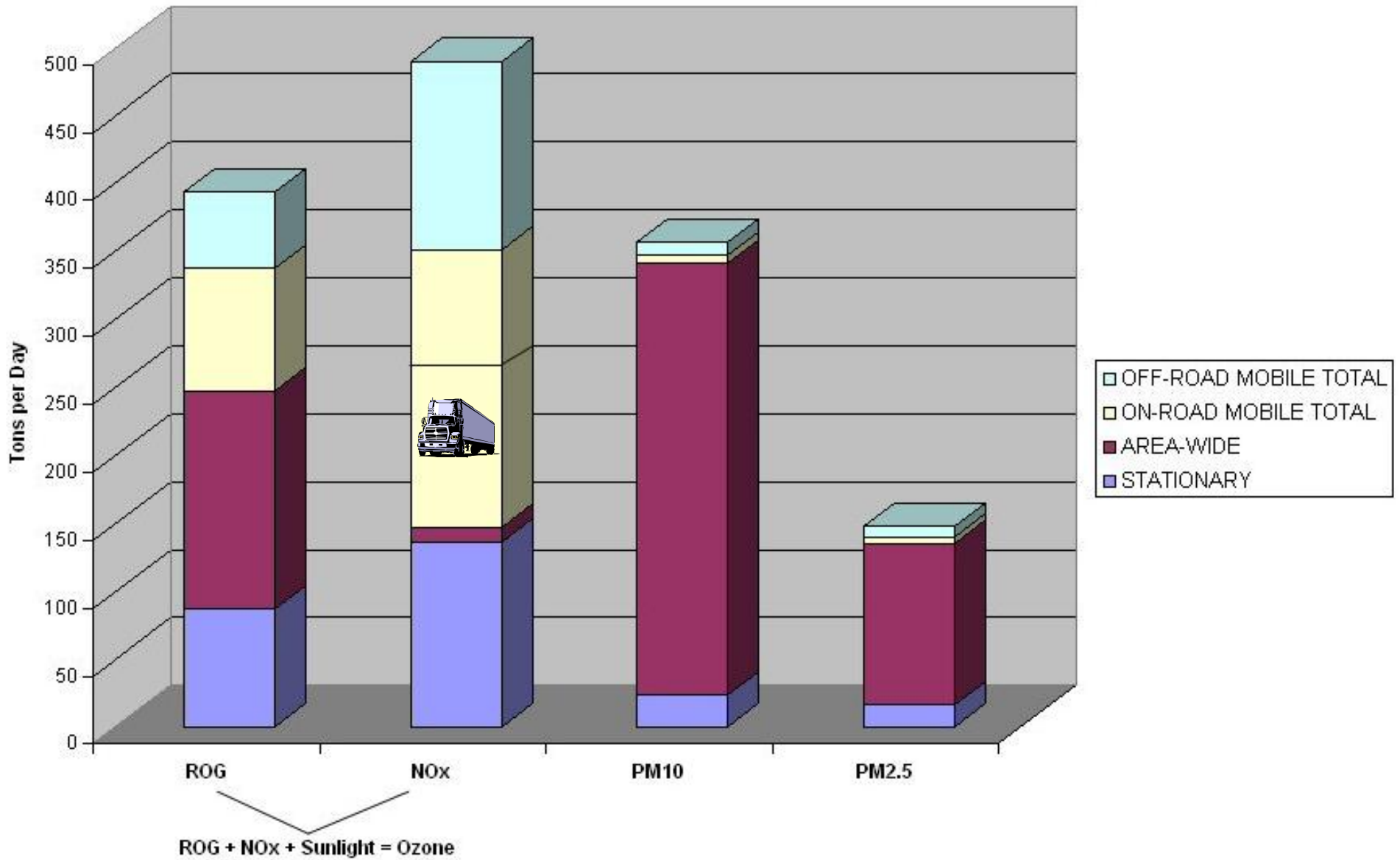
County	Highway 99			Interstate 5		
	Total Vehicles	Trucks	% Trucks	Total Vehicles	Trucks	% Trucks
Kern	131,000	39,300	30%	29,000	8,410	29%
Stanislaus	108,000	15,120	14%	24,000	7,200	30%
San Joaquin	107,000	13,910	13%	101,000	31,310	31%
Fresno	96,000	23,040	24%	31,000	9,300	30%
Madera	59,000	14,160	24%	NA	NA	NA
Merced	52,000	12,480	24%	32,000	9,280	29%
Tulare	46,000	12,880	28%	NA	NA	NA
Kings	NA	NA	NA	33,500	9,715	29%

Air Quality – Emissions Inventory

2004 San Joaquin Valley Ozone Emissions (ROG + NOx)



2004 San Joaquin Valley Emissions Inventory



[An Aging Fleet...]

- n 80% of all diesel engines in California are over 10 years old
- n Truck emissions
 - i 62% from vehicle model years 1966-1996
- n Long life of diesel engines makes turnover alone an insufficient control strategy

[Impact of Through Trucks]

- n 22% of all California Trucks last fueled outside of California
- n ARB and Fresno COG developed DRAFT analysis
 - i MHDT + HHDT Truck emissions are approximately 130 tons per day (ROG + NOx)
 - i Through trucks account for approximately 15 tons per day
 - i 12% of total truck emissions

[Updated Emissions Inventory]

- n ARB currently updating emissions from Heavy-Duty Trucks
- n VMT increases in the Valley by 75%
- n NOx increases by 60 tons per day in 2000
 - i Heavy-Duty Truck Category increases from 15% to 20% of Ozone Inventory

[Resources]

- n Federal Regulations
 - i 2006 Fuel (ULSD) Requirements
 - i 2007 Engine Standards
- n Air District Funding
 - i DMV Fees - \$8 to \$10 million per year
 - i Carl Moyer - \$11 million per year
- n Alternative Fuels (CNG/LNG)

[Thoughts]

- n Further research into the impact of through trucks on roads and air quality
- n Need multiple solutions
- n Work with local, state, and federal agencies
- n Cooperative regional approach throughout the San Joaquin Valley