

# Executive Highlights – Summary of the 2005 Sacramento Region Spare The Air Campaign

## Awareness:

- ◆ *Public awareness of Spare The Air in general increased this year: over six-in-ten respondents in the Sacramento Core Region had heard, read, or seen advertisements about Spare The Air in the 2005 season, up significantly from last year. Specific awareness of the request not to drive the previous day due to unhealthy air, however, has remained unchanged (except for 2002) over the past six years, at approximately three-in-ten respondents.*
- ◆ *Significantly more respondents were aware of Spare The Air (both in general and specifically) on Spare The Air days than on Control days in the region as a whole and the three individual air quality management districts – a continuing indication of the program’s success in raising public awareness about air quality issues.*
- ◆ *An average of 552,240 drivers in the region as a whole noticed the general advisory on the fourteen Spare The Air days during the 2005 season, and 321,070 drivers were specifically aware of the request not to drive. [Estimates include control day correction factors]*

## Driving Reduction:

- ◆ *Nearly a quarter (24%) of all respondents in the region said they drove “less” on Spare The Air days, the highest percentage in the past six years. Significantly more Spare The Air respondents reported driving “less” than Control respondents did.*
- ◆ *That being said, however, only 1.4% of all respondent drivers in the entire region purposefully reduced their driving on Spare The Air days because they wanted to improve air quality in the region and had heard or seen advertisements within the past two days about Spare The Air. The percentage of reducers has stayed approximately the same over the last six years.*
- ◆ *About 17,980 drivers purposefully made fewer trips on average each Spare The Air day in 2005 in order to reduce air pollution.*
- ◆ *The drivers who purposefully reduced driving on Spare The Air days avoided making an average of 3.0 single trips each. Correcting for Control day interviewing, this translates into an average of 37,490 trips purposefully avoided on each Spare The Air day during the 2005 season.*

## Estimated Emission Reductions:

- ◆ *The 2005 Spare The Air program was successful in reducing air pollution in the Sacramento Core Region by an estimated 0.27 tons of ozone precursors per day. This is due specifically to drivers purposefully reducing the number of trips they took on Spare The Air days for air quality reasons. The reduction in tons reduced compared to prior years is due to changes in vehicle emissions rates in the ARB inventory, not to participation in the Spare The Air program.*

## Health Effects:

- ◆ *Despite differences between air districts in terms of peak ozone concentrations, the health effects of ozone air pollution are experienced throughout the whole Sacramento Core Region. Poor air quality contributed to household health problems - breathing difficulties and burning eyes were experienced by significantly more households in the Core Region on and following Spare The Air than Control days. In addition, households in Placer County APCD experienced more coughing and those in Yolo-Solano AQMD experienced significantly more headaches on Spare The Air than on Control days.*

- ◆ *The percentage of households reporting breathing difficulties in the region on Spare The Air days has stayed the same from 2000 to the present, at an average of 13% of all households during the past six years (and 12% this year).*
- ◆ *An additional 60,070 households in the Sacramento Core Region experienced breathing problems during Spare The Air days specifically due to ozone air pollution. This is double the number of affected households from last year due to a significant decrease this year in the percentage of households reporting respiratory problems on control days. Potentially, this could be due to improved air quality on control days, random variation, or it may be simply an anomaly.*

### **Employer Participation:**

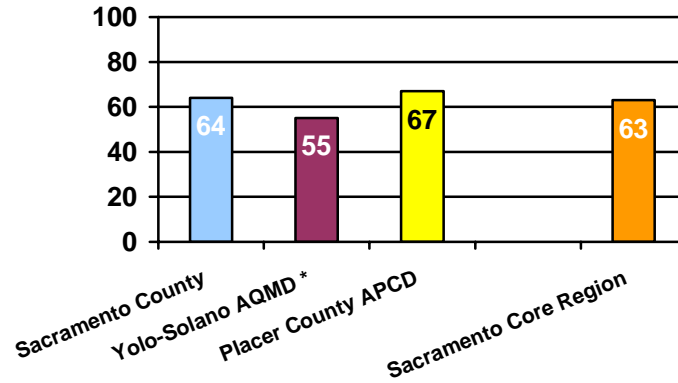
- ◆ *Eighteen percent of employed respondents in the region as a whole said their employer encourages them to drive less on days of poor air quality.*
- ◆ *Employers notified employees about Spare The Air days via e-mail (11%), by posting signs (8%), and by asking them to sign up for Air Alert notifications (4%).*
- ◆ *Employer participation, although higher this year at 18% is not significantly different from the previous two years (both 16%). E-mail notification and the percent of employers posting signs about Spare The Air days have also not changed in three years. Also unfortunate, the percent of employers who ask employees to register to receive Air Alert notifications has not expanded beyond last year's increase. Further efforts to increase employer participation are warranted.*

### **Seasonal Trip Reductions:**

- ◆ *Thirty-six percent of all respondents in the region were seasonal reducers - they said they usually reduce the amount of driving they do during the summer to avoid adding to air pollution. They did so by making fewer trips, staying home, using alternative transportation, consolidating trips, carpooling, and telecommuting.*
- ◆ *These reducers reported entering their cars significantly fewer times than those respondents who said they did not usually reduce driving during the summer. In other words, seasonal driving reducers in the region reported an average of half a trip less per day than non-reducers on both Spare The Air and control days.*
- ◆ *This could translate into 1.6 tons of emission reductions per summer day in 2005.*
- ◆ *For the past six years, the percentage of seasonal trip reducers has remained relatively stable, at just under four-in-ten of all respondents.*

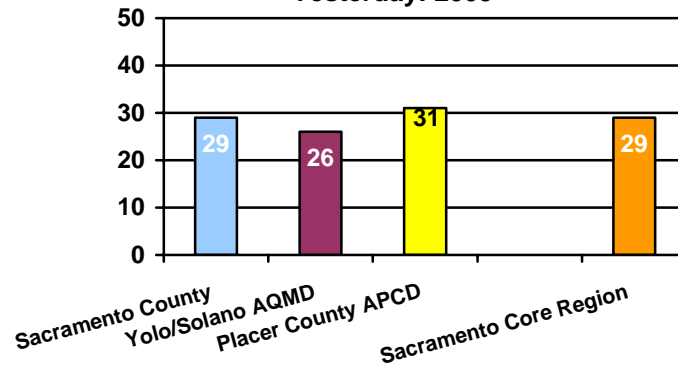
**Awareness:**

**General Awareness of Spare the Air (ARB wording): 2005**

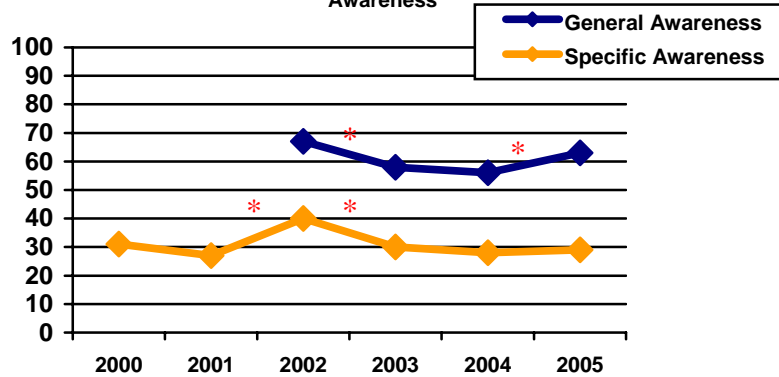


\* significant difference between Yolo-Solano AQMD and all others

**Specific Awareness of Request Not to Drive Yesterday: 2005**



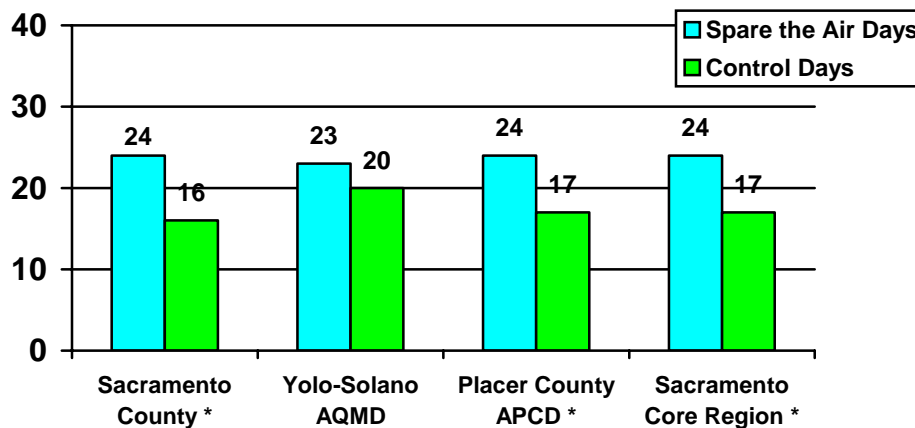
**Sacramento Core Region: Year-by-Year Comparison of Awareness**



\* indicates a statistically significant difference between the years

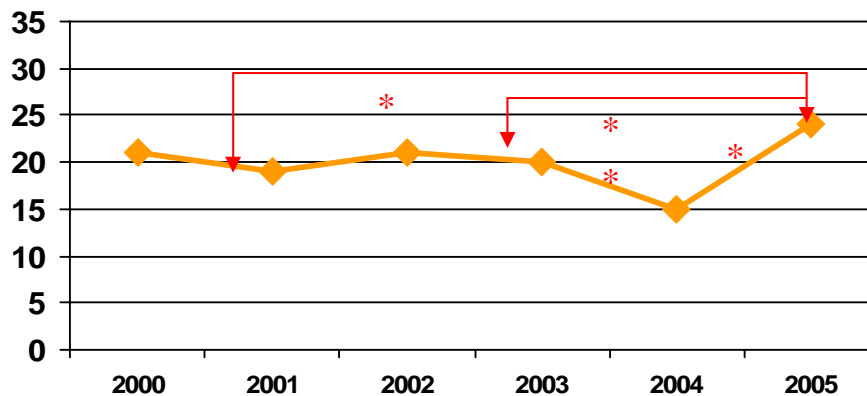
**Driving Reduction:**

**2005 Spare the Air vs Control Days: Percent of respondents who drove "less" the previous day**



\* indicates a statistically significant difference

**Year-by-Year Comparison of Percent of respondents who drove "less" on Spare the Air days: Sacramento Core Region**



\* indicates a statistically significant difference between years



<i>Spare the Air: purposeful reducers in 2005</i>	<i>Number of respondents who reduced driving for air quality reasons and were aware of STA in general</i>	<i>Total number of respondents on days following Spare the Air</i>	<i>% of total respondents who reduced for air quality reasons and were aware of STA in general</i>
<b>Sacramento County</b>	<b>6</b>	<b>403</b>	<b>1.5%</b>
<b>Yolo-Solano AQMD</b>	<b>5</b>	<b>399</b>	<b>1.3%</b>
<b>Placer County APCD</b>	<b>5</b>	<b>342</b>	<b>1.5%</b>
<b>Sacramento Core Region</b>	<b>8</b>	<b>572</b>	<b>1.4%</b>

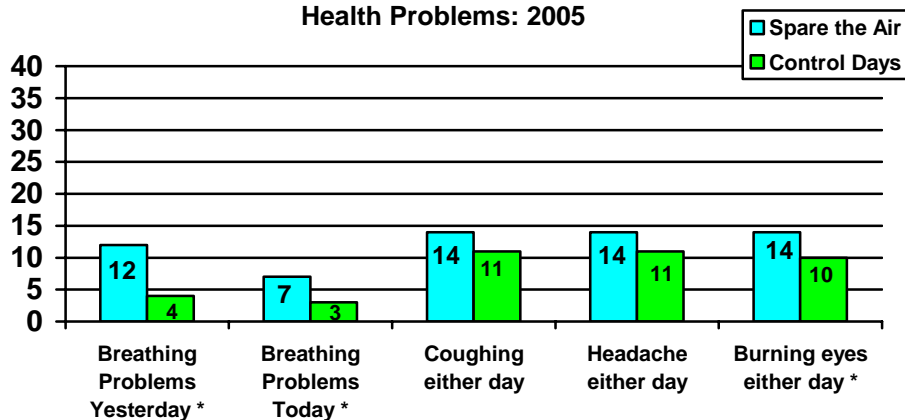
**Estimated Emission Reductions:**

**Emissions Reduction Estimate for 2005 in the Sacramento Core Region**

	<b>Percent of respondent drivers who drove less for Air Quality reasons</b>	<b>x Number of licensed drivers in Sacramento Core Region (1,284,280 total)</b>	<b>x Mean Number of single trips Reduced per day</b>	<b>x 6.60 grams of ozone precursors per trip (EMFAC 2002 V2.2) (Methodology 2003 Triennial Report )</b>	<b>= Estimated Tons per day of ozone precursors reduced</b>
<b>Spare the Air Days</b>	<b>1.4% (8/572)</b>	<b>17,980</b>	<b>x 3.0= 53,940</b>	<b>356,004 grams</b>	<b>0.39 tons</b>
<b>Control Days</b>	<b>0.4% (2/569)</b>	<b>5,140</b>	<b>x 3.2 = 16,450</b>	<b>108,570 grams</b>	<b>0.12 tons</b>
<b>Estimated tons of ozone precursors reduced per day: (STA day reductions – Control day reductions)</b>					<b>0.27 tons</b>

**Health Effects:**

**Spare the Air vs Control Groups: Percent of Sacramento Core Region Respondents whose Households Experienced Health Problems: 2005**

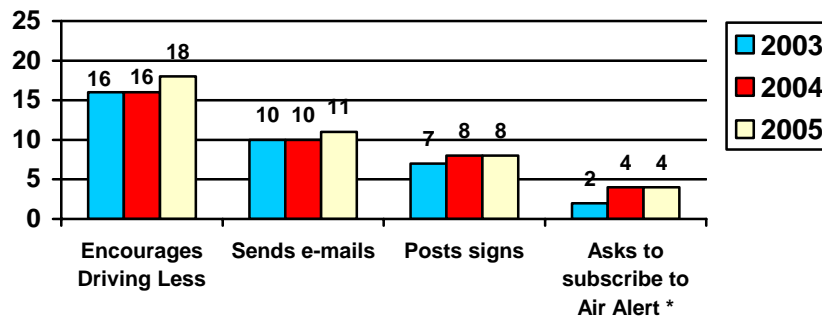


\*indicates a statistically significant difference

<i>Sacramento Core Region as a Whole ( 750,918 households)</i>	<i>Number of Households Affected: Spare the Air respondents</i>	<i>Number of Households Affected: Control respondents</i>	<i>Remaining Number of households affected specifically due to air pollution</i>
<i>Breathing difficulties yesterday</i>	<i>12% = 90,110</i>	<i>4% = 30,040</i>	<i>60,070</i>
<i>Breathing difficulties today</i>	<i>7% = 52,560</i>	<i>3% = 22,530</i>	<i>30,030</i>
<i>Burning eyes yesterday or today</i>	<i>14% = 105,130</i>	<i>10% = 75,090</i>	<i>30,040</i>

**Employer Participation:**

**Employer Participation since 2003  
(Sacramento Core Region)**



**Seasonal Trip Reductions:**

**Year-by-Year Comparison of Percent of respondents who seasonally reduce driving to avoid adding to air pollution: Sacramento Core Region**

