



Executive Highlights Evaluation of the 2007 Sacramento Region Spare The Air Campaign

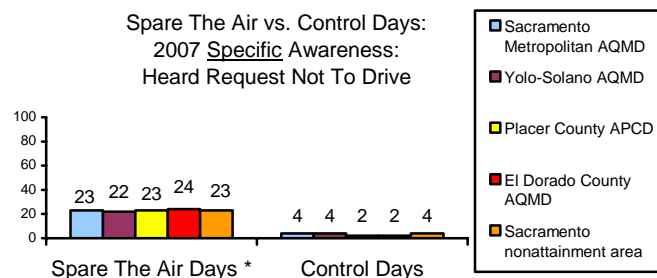
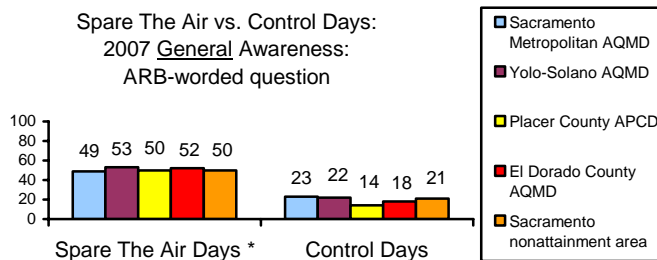
METHODOLOGY:

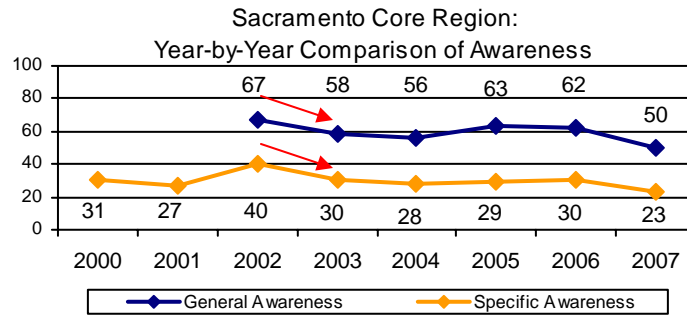
Residents from four air quality management districts in the Sacramento nonattainment area were interviewed for this annual evaluation. A total of 1,074 (462 when weighted proportionately) interviews were conducted following each of the 5 summer 2007 Spare The Air days and 1,621 (611 weighted) interviews were conducted on non-Spare The Air (or Control) days matched for the same day of the week. Based on projected AQI estimates, Spare The Air days are called throughout the entire nonattainment area whenever the AQI is forecasted to reach or exceed 127 anywhere in the Sacramento region. However, this year, the maximum AQI for ozone exceeded the trigger on only one of the five Spare The Air days in the individual air districts (July 5).

SUMMARY RESULTS:

Awareness:

- ◆ Significantly more respondents interviewed following Spare The Air days were aware of the Spare The Air advisories than were respondents interviewed following Control days. This means that respondents are generally not giving what might be considered “socially-acceptable” responses, and attests to the continued effectiveness of the program.
- ◆ Unfortunately, this year’s levels of general (50%) and specific (23%) awareness in the region as a whole are the lowest ever. Both levels are down significantly compared with all previous years. However, this may have been due to a combination of factors: the comparatively few number of Spare The Air days that occurred this summer, the public’s (correct) perception that the air quality was not as poor as was predicted, and to a different media buy strategy announcing each STA day. The type of media purchased may also have made a difference – this year, there was no television advertising for each specific Spare The Air day -- only radio advisories were purchased.



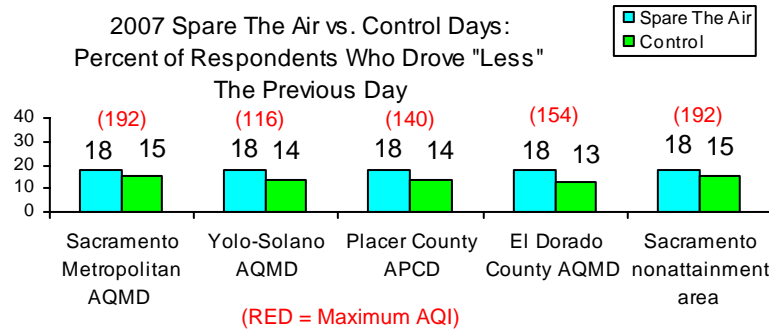


→ indicates a statistically significant difference

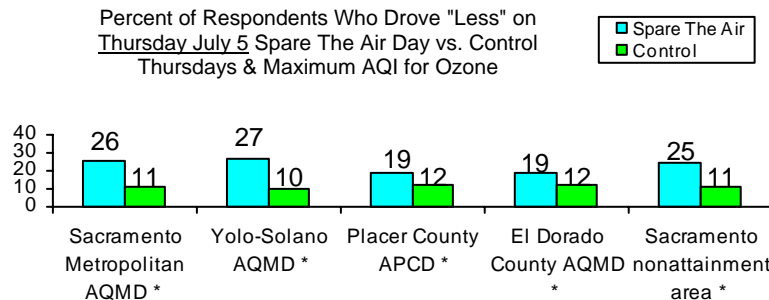
- ♦ Correcting for the number of Control day drivers who erroneously thought they had heard Spare The Air advertisements, a remaining average of 410,618 drivers in the Sacramento nonattainment area noticed the general advisories on Spare The Air days during the 2007 season, and 269,025 drivers were aware of the specific request not to drive. This is down from the estimated 362,041 drivers who noticed the request last year, but closer to the number in the 2004 season (284,185) when the air quality was more similar to this year in that there were only six Spare The Air days.

Driving Reduction:

- ♦ Fewer residents said they drove “less” on Spare The Air days this year (18%) compared with last year (28%). Further, for the first time, the percentage who said they drove less on all Spare The Air days combined was not significantly different from the percentage who drove less on Control days. However, the difference was found to be significant on the one Spare The Air episode when the maximum AQI for ozone reached 192, indicating that perceived air quality likely influenced driving behavior.

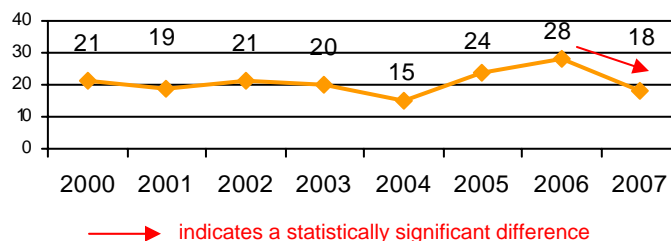


However...





Year-by-Year Comparison: Percent of Respondents Who Drove "Less" on Spare The Air Days:
Sacramento Core Region
(excludes El Dorado County AQMD)



—→ indicates a statistically significant difference

- ♦ The percent of purposeful reducers was 1.3%: these are respondents who were classified as having purposefully driven less on Spare The Air days because they wanted to improve air quality in the region and were aware of the Spare The Air advisories. This year's percent was not different from the eight year average of 1.7%.

Spare The Air: Purposeful Reducers in 2007	Number of Respondents Who Reduced Driving For Air Quality Reasons and Were Aware of STA Advisories	Total Number of Respondents Interviewed on Days Following Spare The Air	% of Total Respondents Who Reduced Driving for Air Quality Reasons and Were Aware of STA Advisories
Sacramento Metropolitan AQMD	4	305	1.3%
Yolo-Solano AQMD	5	309	1.6%
Placer County APCD	1	255	0.4%
Sacramento Core Region	5	436	1.2%
El Dorado County AQMD	4	205	2.0%
Sacramento Nonattainment Area	6	462	1.3%

- ♦ When extrapolated to the population of drivers, about 18,410 drivers in the Sacramento nonattainment area could be said to have purposefully made fewer trips each Spare The Air day in order to reduce air pollution. They avoided making 2.6 single trips on average. This translates into 47,866 trips that were purposefully avoided on Spare The Air days during the 2007 season.

Estimated Emission Reductions:

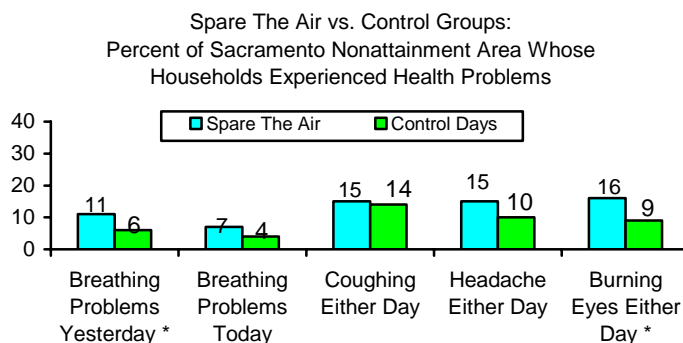
- ♦ Correcting for control day interviewing, the 2007 Spare The Air program was successful in reducing air pollution in the entire Sacramento nonattainment area (SNA) by an estimated 0.09 tons of ozone precursors per day. This is due specifically to drivers purposefully reducing the number of trips they took on Spare The Air days for air quality reasons.



Sacramento nonattainment Area	Percent of Respondent Drivers who Drove Less for Air Quality Reasons	x Number of Licensed Drivers in SNA (1,415,921 Total)	x Mean Number of Single Trips Reduced Per Day	x 5.79 Grams of Ozone precursors per trip (EMFAC 2007 V2.3) 2007 Model	= Estimated Tons Per Day of Ozone Precursors Reduced
Spare The Air Days	1.3% (6 / 462)	18,410	x 2.6 = 47,866	277,144 grams	0.31 tons
Control Days	0.7% (4 / 611)	9,911	x 3.5 = 34,689	200,849 grams	0.22 tons
Estimated Tons of Ozone Precursors Reduced Per Day: (STA Day Reductions – Control Day Reductions)					0.09 tons

Health Effects:

- ◆ Although the air this summer was relatively clean as far as air quality was concerned, respondents still reported experiencing significantly more breathing difficulties (11%) and burning eyes (16%) in households interviewed about Spare The Air days than about Control days in the Sacramento nonattainment area.
- ◆ The percentage reporting breathing difficulties in the Sacramento Core Region on Spare The Air days has stayed the same from 2000 to the present, at an average of 11% of all households during the past eight years. An average of 8% of households interviewed on Control days experienced breathing problems.
- ◆ Correcting for Control days (6%, or 50,420 households this year), an estimated 42,017 households in the Sacramento nonattainment area experienced breathing problems during Spare The Air days specifically due to ozone air pollution. In addition, 58,823 households experienced burning eyes.
- ◆ Household health appeared to be related to the AQI range reached in each individual air district. For example, breathing problems were experienced by significantly more households on Spare The Air days in the three air districts where the maximum AQI for ozone on Spare The Air days was in the “Moderate” or “Unhealthy For Sensitive Groups” range – Sacramento Metropolitan AQMD, Placer County APCD, and El Dorado County AQMD.



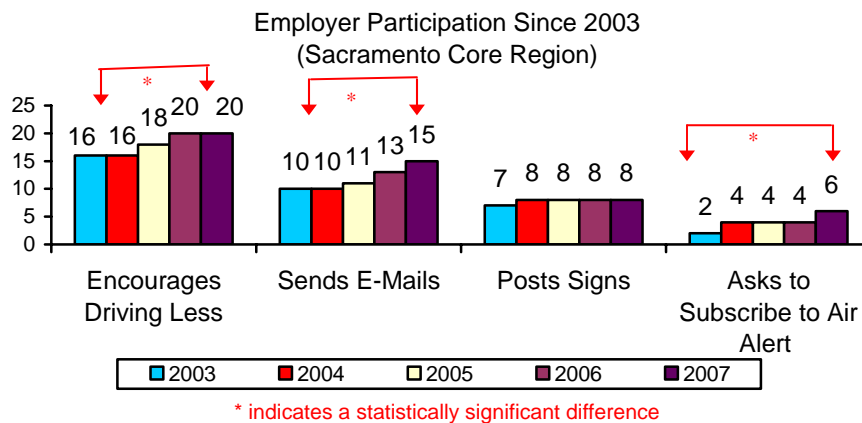
* indicates a statistically significant difference



	Number of Households Affected		
Sacramento Nonattainment Area (840,334 Households)	Spare The Air Respondents	less Control Respondents	equals # of Households Affected Specifically Due to Air Pollution on STA Days
Breathing Difficulties Yesterday	11% = 92,437	6% = 50,420	42,017
Burning Eyes Yesterday or Today	16% = 134,453	9% = 75,630	58,823

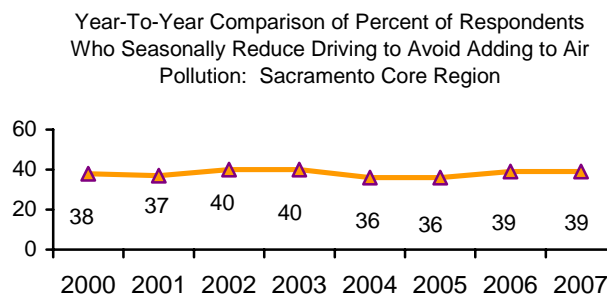
Employer Participation:

- ◆ Employer participation in the Spare The Air program is the same as it was in 2006 (at 20%). However, this is significantly higher than it was in 2003 and 2004 (both 16%). More employers are using e-mail to tell their employees about poor air quality days now than in 2003 and 2004. The percent of employers who post signs about Spare The Air days (8%) has not changed in five years. However, more employers are now asking their employees to register to receive Air Alert notifications than in previous years (6%).



Summertime Seasonal Trip Reductions:

- ◆ Nearly four-in-ten (39%) respondents in the Sacramento nonattainment area are summertime seasonal driving reducers. They said they usually reduce the amount of driving they do during the summer to avoid adding to air pollution by making fewer trips, staying home, consolidating trips, walking, bicycling, carpooling, and using public transit.



These reducers reported entering their cars significantly fewer times than those respondents who said they did not usually reduce driving during the summer, making on average, 0.61 of a trip less per day than non-reducers.

<i>Year</i>	<i>Seasonal Driving Reducers: Mean # Times Entered Vehicle</i>	<i>Non-Reducers: Mean # Times Entered Vehicle</i>	<i>Difference (Mean Number of Daily Single Trips Avoided by Seasonal Reducers)</i>	<i>Statistically Significant Difference?</i>
2000	3.6	4.1	0.5	Yes
2001	3.1	4.2	1.1	Yes
2002	3.1	4.1	1.0	Yes
2003	3.1	4.2	1.1	Yes
2004	3.4	3.9	0.5	Yes
2005	3.0	3.5	0.5	Yes
2006	2.9	3.6	0.7	Yes
2007	3.2	3.8	0.6	Yes

- ◆ *These avoided trips could translate into an estimated 2.2 tons of emission precursor reductions per summer day in 2007. Air quality management districts may want to document and use the additional estimated emission reductions by those who may not otherwise qualify as episodic reducers on Spare The Air days for methodological reasons.*