



Executive Highlights: Evaluation of the 2013 Sacramento Region Spare The Air Campaign

METHODOLOGY:

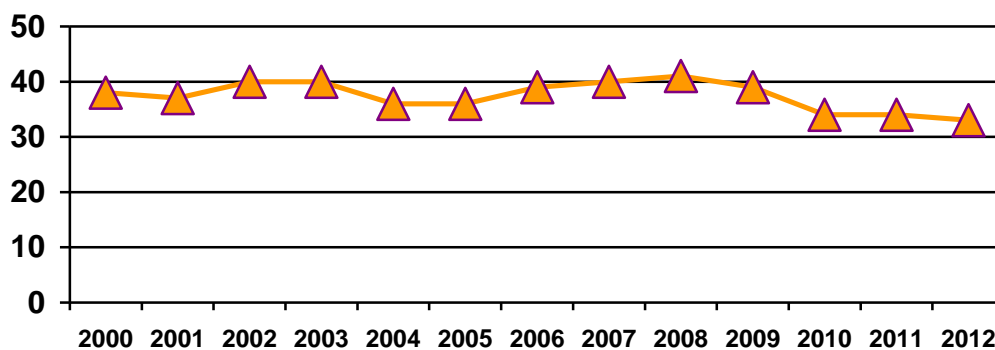
Spare The Air advisories are issued whenever the Air Quality Index (AQI) is forecast to reach or exceed 127 anywhere in the Sacramento region. Drivers are asked to voluntarily reduce the amount of driving they do on such days. Random samples of residents with landline telephones from four air quality management districts in the Sacramento Nonattainment Area were interviewed. A total of 549 (263 when weighted proportionately) interviews were conducted following the **two** Spare The Air days in 2013. On non-Spare The Air (or Control) days 674 (366 weighted) interviews were conducted on matched days of the week.

SUMMARY RESULTS:

Summertime Seasonal Trip Reductions:

- ◆ One third (32%) of all respondents in the Sacramento Nonattainment Area are seasonal reducers – that is, they say they usually reduce the amount of driving they do during the summer to avoid adding to air pollution. This translates into nearly half a million (473,477) drivers in the area who are seasonal reducers. The level is not significantly different from the 14-year average of 36%.

Year-To-Year Comparison of Percent of Respondents Who Seasonally Reduce Driving to Avoid Adding to Air Pollution: Sacramento Core Region

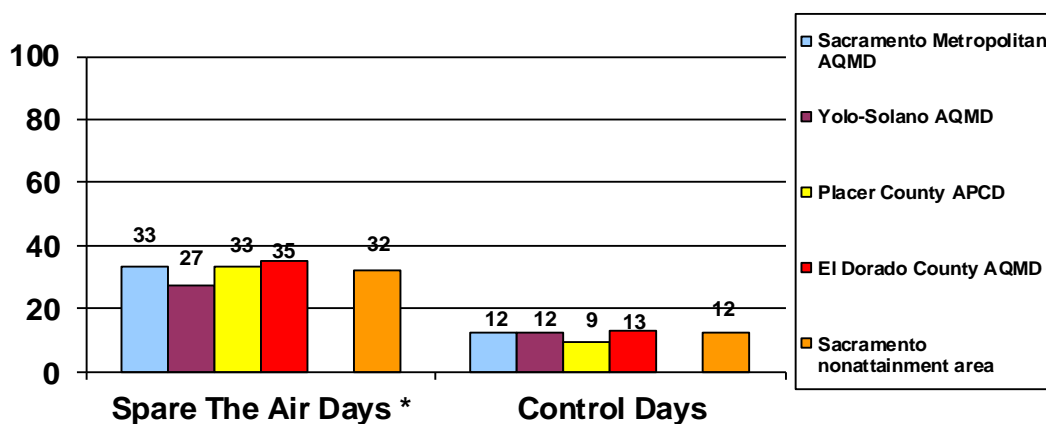


- ◆ Summertime driving reducers made fewer trips than those who did not change their driving habits during the summer: on average, they made 0.32 fewer trips per day.
- ◆ These avoided trips represent a reduction of 0.55 tons per day of ozone precursors. Although not considered part of the official measurement, **this group nevertheless continues to contribute to voluntary emission reductions during the summer months.**

Awareness:

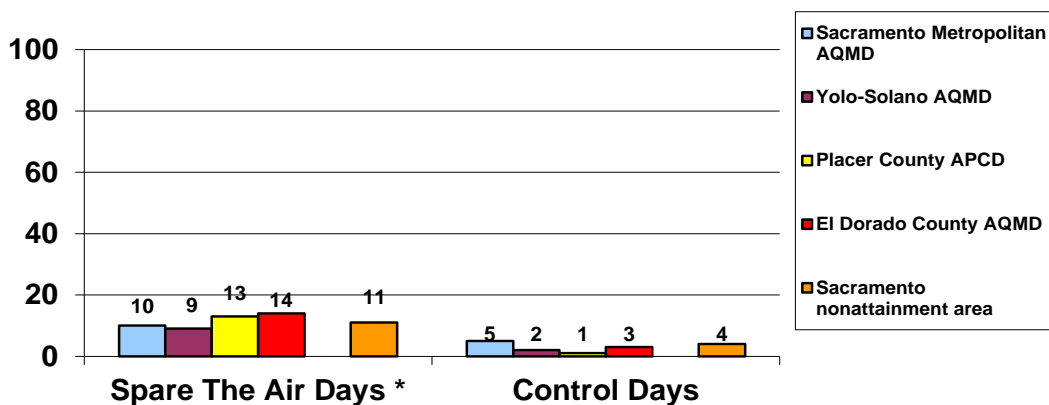
- ◆ The level of general awareness of Spare The Air in 2013, which only had two (2) Spare The Air days, decreased from previous years – an average of 32% of respondents in the entire Sacramento region had heard, read, or seen the Spare The Air advertisements.
- ◆ In terms of general awareness and adjusting for Control day responses, results indicate that **707,777 drivers** in the entire Nonattainment Area were aware of Spare The Air.
- ◆ Significantly more respondents interviewed following Spare The Air days were aware of the program than were their Control day counterparts, once again indicating that the message is still getting through and being heard by residents.

Spare The Air vs. Control Days: 2013 General Awareness



- ◆ 11% of respondents in the entire Sacramento Nonattainment Area were aware of the specific episodic request not to drive on Spare The Air days. Adjusting for Control day responses, this means that nearly a quarter of a million (**243,298 drivers**) in the region remembered the request not to drive.

Spare The Air vs. Control Days: 2013 Specific Awareness



Driving Reduction:

- ◆ Nearly one in four (23%) of respondents in the Sacramento Nonattainment Area as a whole said they drove less on Spare The Air days. The percentage was highest among Sacramento Metropolitan residents (23%), and lowest among Placer County APCD residents (15%).
- ◆ Significantly more respondents drove less on Spare The Air days than on Control days; another indication of the continuing effectiveness of the program.
- ◆ Using the strict ARB methodology, and after weighting, some respondent drivers (0.4%) in the Sacramento Nonattainment Area were classified “purposeful reducers” -- they drove less on Spare The Air days because they heard the Spare The Air advisories and wanted to improve air quality in the region.
- ◆ The percentage of purposeful reducers (0.4%) in the Sacramento Core Region is low, but not significantly lower than the 14-year average of 1.3% of drivers who reduced driving on Spare The Air days in order to help improve air quality.
- ◆ In the Sacramento Nonattainment Area, **5,919 trips were avoided by purposeful reducers.**

<i>Air District</i>	<i>Estimated Number of Purposeful Reducers</i>	<i>Mean # of Trips Avoided for Air Quality Reasons</i>	<i>Estimated Number of Single Trips Reduced</i>
Sacramento Metropolitan AQMD	5,650	1	5,650
<i>Yolo-Solano AQMD</i>	<i>0</i>		<i>0</i>
Placer County APCD	1,641	1	1,641
<i>Sacramento Core Region¹</i>	<i>5,533</i>	<i>1</i>	<i>5,533</i>
El Dorado County AQMD	869	1	869
Sacramento Nonattainment Area²	5,919³	1	5,919 trips

Estimated Emission Reductions:

- ◆ The 2013 Spare The Air voluntary driving reduction program was successful in reducing air pollution in the entire Sacramento Nonattainment Area by an estimated **0.02 tons of ozone precursors per Spare The Air day.** This is due specifically to drivers purposefully reducing the number of trips they took on Spare The Air days for air quality reasons.

¹ Excludes El Dorado County AQMD.

² Includes El Dorado County AQMD.

³ The results for the Sacramento Nonattainment Area as a whole are not the simple sum of the individual air districts, but rather, are weighted results that reflect the relative proportional distribution of residents in the area.

- ◆ This was also true in the Sacramento Metropolitan AQMD -- 0.02 tons of ozone precursors were also reduced per Spare The Air day

Sacramento Nonattainment Area	Percent of Respondent Drivers Who Drove Less for Air Quality Reasons ⁴	X Number of Licensed Drivers in Sacramento Nonattainment Area (1,479,618 Total)	X Mean Number of Single Trips Reduced Per Day	X 3.29 Grams of Ozone Precursors Per Trip (EMFAC 2011 V2.3) 2013 summer	= Estimated Tons per Day of Ozone Precursors Reduced
Spare The Air Days	0.4% (1 / 263)	5,919	5,919	19,474 grams	0.02 tons
Control Days	0.0% (0 /366)	0	0	0 grams	0.00 tons
Estimated Tons of Ozone Precursors Reduced Per Day: (STA Day Reductions minus Control Day Reductions)					0.02 tons

Summer 2013 Health Issues:

- ◆ Thirteen percent (13%) of households in the entire Sacramento Nonattainment Area reported breathing problems on Spare The Air days in 2013. Correcting for control day responses, this translates into 60,971 additional households that were affected specifically by pollution on Spare The Air days during the summer of 2013.
- ◆ Respondents from Placer County APCD and El Dorado County AQMD experienced the most difficulty breathing on either day. It's important to note that smoke from two large wildfires, the American Fire and the Rim Fire, was experienced in those two counties during both declared Spare The Air days. Additionally, these respondents exhibit the greatest difference between Spare The Air and Control days. This may be due at least in part to wildfire smoke as well

⁴ In addition, in the case of Spare The Air respondents, these drivers had to say they had heard the Spare The Air advisory (the ARB general awareness question - Q12b).



Year-to-Year Comparison of Percent of Respondents Whose Households Experienced Breathing Problems on Spare The Air days

