



## Executive Highlights: Evaluation of the 2015 Sacramento Region Spare The Air Campaign

### **METHODOLOGY:**

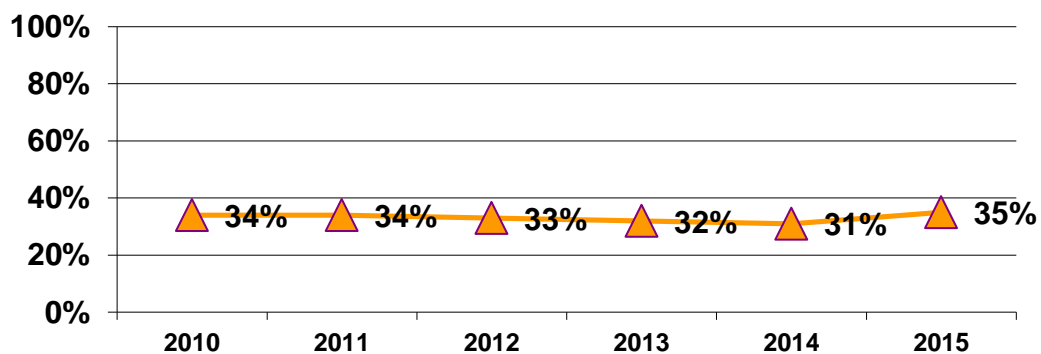
Spare The Air alerts are issued whenever the Air Quality Index (AQI) is forecast to reach or exceed 127 anywhere in the Sacramento region. Drivers are asked to voluntarily reduce the amount of driving they do on such days. Random samples of listed residents with landline telephones from four air districts representing five counties in the Sacramento Nonattainment Area were interviewed. A total of 1008 (470 when weighted proportionately) interviews were conducted following the **five** Spare The Air days in 2015. On non-Spare The Air (or Control) days 1004 (489 weighted) interviews were conducted on matched days of the week.

### **SUMMARY RESULTS:**

#### **Summertime Seasonal Trip Reductions:**

- ◆ Nearly one third (35%) 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 (528,730) drivers in the area who are seasonal reducers. The level is not significantly different from the six-year average of 33%.

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

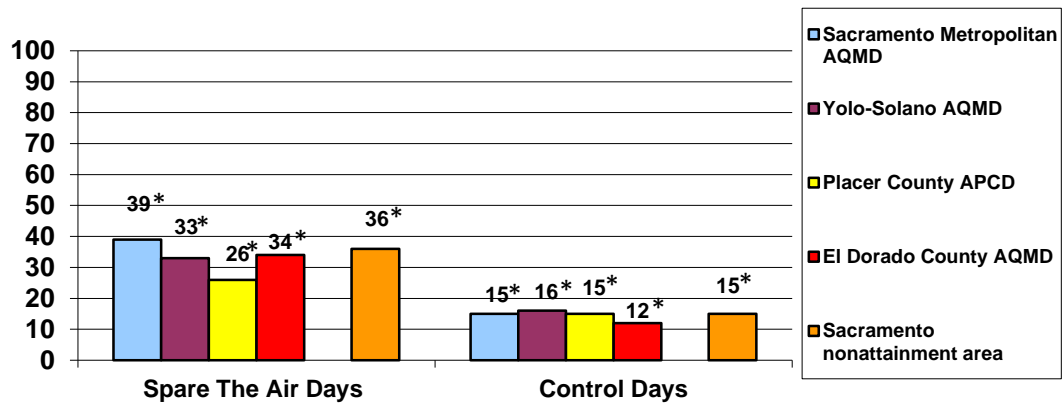


- ◆ Summertime driving reducers made fewer trips than those who did not change their driving habits during the summer: on average, they made .57 fewer trips per day.
- ◆ The number of trips avoided by summertime seasonal reducers translates into a reduction of 0.86 tons per day of ozone precursors during the summer of 2015. Although not considered part of the official measurement, **these Spare The Air success stories continue to contribute to voluntary emission reductions during the summer months.**

**Awareness:**

- ◆ For general awareness, an average of 36% of respondents in the entire Sacramento region had heard, read, or seen the Spare The Air advertisements. This translates to an estimated **543,837 drivers** in the entire Nonattainment Area who were aware of Spare The Air in general.
- ◆ 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.

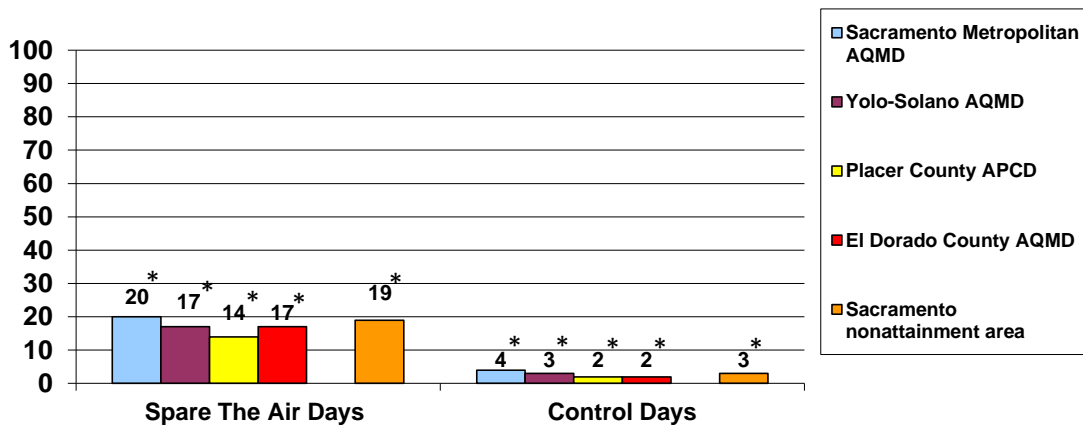
**Spare The Air vs. Control Days: 2015 General Awareness**



\* indicates statistically significant differences between Spare The Air and Control percentages.

- ◆ An average of 19% of respondents in the 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 **241,705 drivers** in the region remembered the request not to drive.

**Spare The Air vs. Control Days: 2015 Specific Awareness**



\* indicates statistically significant differences between Spare The Air and Control percentages.

**Driving Reduction:**

- ◆ One in five (20%) respondents in the Sacramento Nonattainment Area as a whole said they drove less on Spare The Air days.
- ◆ Using the strict ARB methodology, and after weighting, 2.8% of respondent drivers met the ARB standard of “purposeful reducer” -- they drove less on Spare The Air days because they heard the Spare The Air alerts and wanted to improve air quality in the region.
- ◆ The 2.8% percent of purposeful reducers in the Sacramento Nonattainment Area is a six year high, significantly higher than each previous year since 2010.
- ◆ In the Sacramento Nonattainment Area, a total of **126,876 trips were avoided by purposeful reducers** each Spare The Air day in 2015 due to the campaign.

<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>
<b>Sacramento Metropolitan AQMD</b>	<b>38,376</b>	<b>3</b>	<b>115,128</b>
<b>Yolo-Solano AQMD</b>	<b>849</b>	<b>4</b>	<b>3,396</b>
<b>Placer County APCD</b>	<b>1,928</b>	<b>2</b>	<b>3,856</b>
<b>El Dorado County AQMD</b>	<b>589</b>	<b>1</b>	<b>589</b>
<b>Sacramento Nonattainment Area<sup>1</sup></b>	<b>42,292<sup>2</sup></b>	<b>3</b>	<b>126,876 trips</b>

**Estimated Emission Reductions:**

- ◆ The 2015 Spare The Air voluntary driving reduction program was successful in reducing air pollution in the Sacramento Nonattainment Area by an estimated **0.28 tons of ozone precursors per Spare The Air day**. This is due specifically to drivers who heard a request to reduce driving and purposefully reduced the number of trips they took on Spare The Air days for air quality reasons.
- ◆ This was also true in the Sacramento Metropolitan AQMD -- 0.28 tons of ozone precursors were reduced per Spare The Air day.

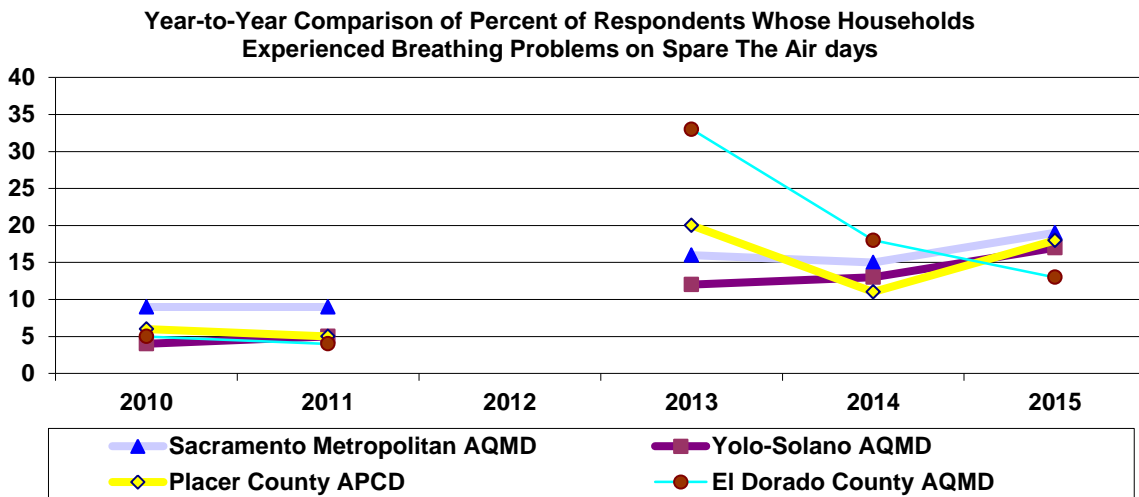
<sup>1</sup> Includes El Dorado County AQMD.

<sup>2</sup> 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.

Sacramento Nonattainment Area	Percent of Respondent Drivers Who Drove Less for Air Quality Reasons <sup>3</sup>	X Number of Licensed Drivers in Sacramento Nonattainment Area (1,510,657 Total)	X Mean Number of Single Trips Reduced Per Day (3)	X 2.58 Grams of Ozone Precursors Per Trip (EMFAC 2011 V2.3) 2015 summer	= Estimated Tons per Day of Ozone Precursors Reduced
<b>Spare The Air Days</b>	<b>2.8% (13 / 470)</b>	<b>42,298</b>	<b>126,894</b>	<b>327,386 grams</b>	<b>0.36 tons</b>
<b>Control Days</b>	<b>0.4% (2/489)</b>	<b>9,094</b>	<b>27,282</b>	<b>70,388 grams</b>	<b>0.08 tons</b>
<b>Estimated Tons of Ozone Precursors Reduced Per Day: (STA Day Reductions minus Control Day Reductions)</b>					<b>0.28 tons</b>

**Summer 2015 Health Issues:**

- ◆ Fourteen percent (18%) of households in the Sacramento Nonattainment Area reported breathing problems on Spare The Air days in 2015. However, 15% of households in the Sacramento Nonattainment Area reported breathing problems on Control days.
- ◆ Wildfire smoke may have influenced Control day health concerns. As a result, few differences are found between Spare The Air and Control Day health effects.
- ◆ Reports of health concerns in each of the individual air districts are very similar to 2014. Consistent health concern rates from 2013 through 2015 suggest a greater sensitivity to air pollution than what respondents experienced in 2010 and 2011. Health effects were not surveyed in 2012.



<sup>3</sup> In addition, in the case of Spare The Air respondents, these drivers had to say they had heard the Spare The Air alert (the ARB general awareness question - Q12b).