



Executive Highlights: Evaluation of the 2018 Sacramento Region Spare The Air Campaign

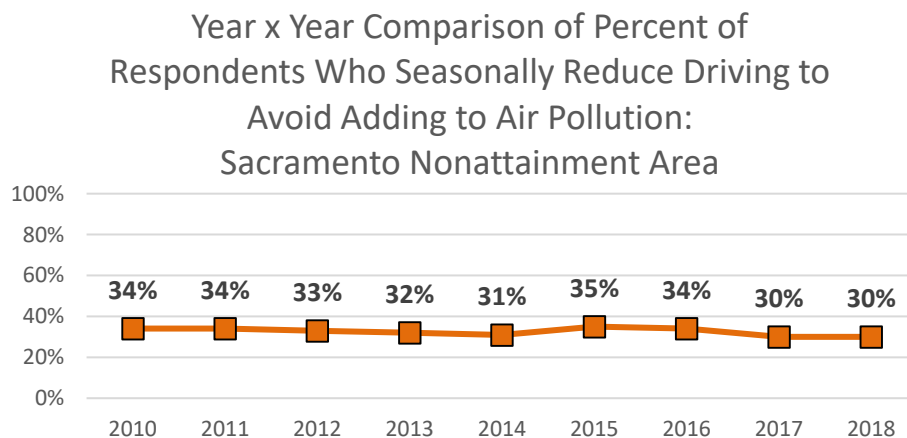
METHODOLOGY:

Spare The Air alerts are issued whenever the Air Quality Index (AQI) is forecast to reach or exceed 126 anywhere in the Sacramento region. Drivers are asked to voluntarily reduce the amount of driving they do on such days. Random samples of residents from four air districts representing five counties in the Sacramento Nonattainment Area are interviewed. A total of 768 (331 when weighted proportionately) interviews were conducted following 9 of the 20 Spare The Air days in 2018. On non-Spare The Air (or Control) days 582 (284 weighted) interviews were conducted on matched days of the week.

SUMMARY RESULTS:

Summertime Seasonal Trip Reductions:

- ◆ Nearly one third (30%) 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 503,311 drivers. This year’s percentage of seasonal reducers in the Sacramento Core Region is not significantly different from the nine-year average of 33%. That the program continues to inspire seasonal reduction is testament to the efforts spent keeping Spare The Air effective.

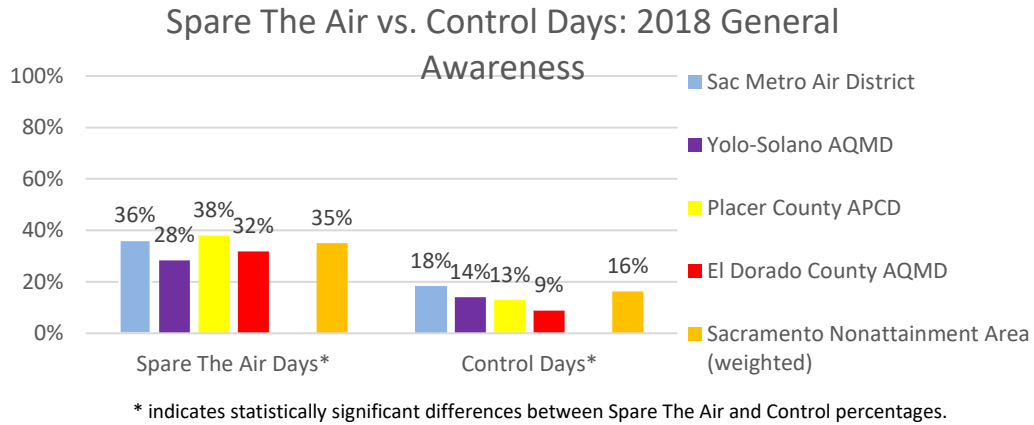


- ◆ Summertime driving reducers made fewer trips than those who did not change their driving habits during the summer: on average, they made .6 fewer trips per day.
- ◆ The number of trips avoided by summertime seasonal reducers translates into a reduction of 0.93 tons per day of ozone precursors during the summer of 2018. 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.

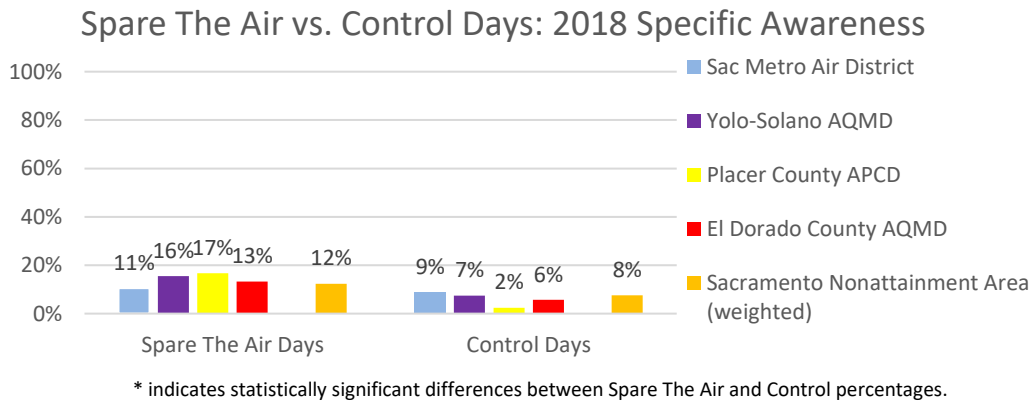


Awareness:

- ◆ For general awareness, an average of 35% of respondents in the entire Sacramento region had heard, read, or seen the Spare The Air advertisements. This translates into an estimated **589,529 drivers** in the entire Nonattainment Area who were aware of Spare The Air in general.
- ◆ Levels of both general and specific awareness of Spare The Air were significantly higher when respondents were interviewed following Spare The Air days than on Control days, an indication that the episodic announcements are effective at reaching the Sacramento region’s residents throughout the summer.



- ◆ An average of 12% 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 **64,498 drivers** in the region remembered the request not to drive.



Driving Reduction:

- ◆ Nearly one in five (18%) respondents in the Sacramento Nonattainment Area said they drove less on Spare The Air days, which is consistent with the nine-year average of 20%.
- ◆ Using the strict ARB methodology, and after weighting, 0.28% 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.

- ◆ After weighting, an estimated **4,716 drivers in the Sacramento Nonattainment Area purposefully made fewer trips each Spare The Air day in 2018** in order to reduce air pollution.
- ◆ That translates into a total of **18,864 trips avoided by purposeful reducers each Spare The Air day** in 2018 in the Sacramento Nonattainment Area due to the campaign.

Air District	Estimated Number of Purposeful Reducers	Mean # of Trips Avoided for Air Quality Reasons	Estimated Number of Single Trips Reduced
Sac Metro Air District	0	0	0
Yolo-Solano AQMD	1,175	4	4,700
Placer County APCD	3,176	2	6,352
El Dorado County AQMD	756	2	1,512
Sacramento Nonattainment Area	4,716¹	4	18,864 trips

Estimated Emission Reductions:

- ◆ More than triple the 2017 season, the 2018 Spare The Air voluntary driving reduction program was successful in reducing air pollution in the Sacramento Nonattainment Area by an estimated **0.058 tons of ozone precursors on each of the 20 Spare The Air days**. 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.
- ◆ Overall the data indicate the program can be successful at reducing emissions.

Sacramento Nonattainment Area	Percent of Respondent Drivers Who Drove Less for Air Quality Reasons ²	X Number of Licensed Drivers in Sacramento Nonattainment Area (1,684,369 Total)	X Mean Number of Single Trips Reduced Per Day (4)	X 2.77 Grams of Ozone Precursors Per Trip (EMFAC 2017) 2018 summer	= Estimated Tons per Day of Ozone Precursors Reduced
Spare The Air Days	0.28% (1/331)	4,716	18,864	52,253 grams	0.058 tons
Control Days	0.0% (0/284)	0	0	0 grams	0.00 tons
Per Episode Estimated Tons of Ozone Precursors Reduced: (STA Day Reductions minus Control Day Reductions)					0.058 tons

¹ The results for the Sacramento Nonattainment Area 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.

² 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).



Summer 2018 Health Issues:

- ◆ Seventeen percent (24%) of households in the Sacramento Nonattainment Area reported breathing problems on Spare The Air days in 2018.
- ◆ The percentage of reported health effects in 2018 suggests the impact of air quality on health is becoming more pronounced with time.

