



## **Fiscal Year 2004 Special Project**

# **Air Aware-Gas Cap Exchange Project**



City of Albuquerque  
Environmental Health Department  
Air Quality Division  
September 2004

## **Forward**

This report is being provided to the United States Environmental Protection Agency's Region 6 representatives upon completion of the Air Aware Gas Cap Exchange Project for fiscal year 2004. The report documents the planning, implementation, success and lessons learned of the project.

The Environmental Health Department, Air Quality Division (Division) applied for and received grant funding to conduct this project to raise the general public's level of awareness regarding air quality by engaging their participation. The target audience included the residential communities in Bernalillo, Sandoval and Valencia counties.

Division staff gratefully acknowledges the cooperation of the Environmental Health Department, Vehicle Pollution Management Division and the voluntary efforts from businesses from automotive retail parts sales and dealerships that acted as agents to distribute vouchers and gas caps to the public.

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## **FY04 Special Project**

### **Air Aware-Gas Cap Exchange Project**

#### **Goal**

The goal of the **Air Aware** campaign was to reduce air pollution from mobile sources and preserve attainment for ground-level ozone through improved community awareness of issues affecting ambient air quality.

#### **Project Overview**

The project was implemented during fiscal year 2004, beginning with the development of the exchange document (Voucher, see Article A) and procedure. The voucher contains most of the guidance necessary to participate in the project. Due to the size of the voucher, addresses and locations were not included. All the outreach materials contained a contact phone number (505-764-1110). Air Quality Division (Division) staff was responsible for directing the public to the nearest Air Aware Partner. They were provided an Air Aware Partner listing, associated addresses and phone numbers.

Air Aware Partners were recruited from retail automotive parts stores and dealerships because they are the logical links for the public to obtain a new gas cap. These partners were provided outreach posters and orientation materials prior to the project's implementation. Attached is the Orientation Letter (Article B) that was used in training for Air Aware Partners and city staff.

Division staff worked with Vehicle Pollution Management Division (VPMD) staff to decide what data would be useful and necessary to the project's success. The main piece of data that was collected to establish participation in the exchange program was the "reason" that the gas cap failed. This was filled in by VPMD staff during a leak test using new Inspection and Maintenance equipment (BAR 97). A gas cap will fail if it is missing, broken, or if it is not specifically designed for the vehicle it is installed on. Vehicle Information Number (VIN), make, model or body style, and year information is useful quality assurance data.

Advertising outreach encouraged the public to visit the VPMD facility to obtain a free leak check on their gas cap and a voucher to obtain a gas cap. If their cap failed, they were given a voucher worth up to \$10.00 to be redeemed at the nearest Air Aware Partner. Vouchers that were collected from VPMD and Air Aware Partners were processed for reimbursement for the Partnering organization.

Data management included documenting invoice and associated voucher from each partner. These reports were submitted to City of Albuquerque Department of Finance for processing. Each Air Aware Partner was issued reimbursement checks that referenced the Partner's billing location, Federal Tax Identification Number, Invoice numbers, Voucher numbers, and report amount. All data processed through this project was managed in a Microsoft Access Database.

## Community Outreach

The project was funded for posters and bus panel billboards (Figures 1 through 3 on pages 4 and 5) as the primary advertisements to inform the public. In addition to these articles, City of Albuquerque Mayor Martin J. Chávez kicked-off the project with a press conference.



Figure 1. Air Aware Poster

All Air Aware posters were translated to Spanish, due to the large Spanish speaking population in Bernalillo county. Air Aware posters were displayed at over 500 locations including Air Aware Partner facilities, libraries, community centers, senior centers, multi-housing (apartments) units, City and County offices, and Air Care Centers. Air Care Centers are private businesses that participate in the Inspections and Maintenance Vehicle Emission Program.

Bus panels included 15 King Panels (30 inches by 144 inches), 15 Tail Panels (17 inches by 48 inches), and six (6) Queen Panels (30 inches by 80 inches) which were donated by the City of Albuquerque Transit Department. The American Lung Association of New Mexico was also recruited to support Air Aware as a sponsor on the panels and posters. Figures 4 through 7 are digital photographs of the posters installed on the buses.



Figure 2, 3. Air Aware Bus Panels



Figure 4-7. Air Aware Bus Panel Photos

## Project Implementation

In preparation for the project implementation, AQD staff recruited retail automotive part stores and dealerships as Air Aware Partners to facilitate the gas cap exchange. They agreed to volunteer as a site where a Gas Cap Voucher (Article A) can be exchanged for a new gas cap. Initially, vouchers were given to the public by City of Albuquerque Vehicle Pollution Management staff during a voluntary gas cap check. Beginning in late June, the public could also obtain a voucher from Air Care stations that were operating the new vehicle emission testing equipment (BAR 97) capable of performing gas cap pressure checks.

Air Aware Partners consist of the retail parts service and dealerships at 23 locations throughout Bernalillo county. Table 1 is a list of our Air Aware Partners. Although staff also recruited sites from adjoining counties (Sandoval and Valencia), no real participation was evident from those communities.

<b>American Toyota</b>	<b>Carquest Auto Parts</b>	<b>Casa Chevrolet</b>
<b>Casa Chrysler Jeep</b>	<b>Chalmer's Ford</b>	<b>Galles Chevrolet</b>
<b>Galles &amp; Davis Oldsmobile</b>	<b>Karl Malone Toyota</b>	<b>Melloy Dodge</b>
<b>NAPA Auto Parts</b>	<b>Pep Boys Auto Parts</b>	<b>Perfection Honda</b>
<b>Reliable Chevrolet</b>	<b>Richardson Ford</b>	<b>Turner Ford</b>
<b>University VW/Mazda</b>	<b>Zangara Dodge</b>	

**Table 1. Air Aware Partners**

The project was initiated with a quiet start in March, and officially with Mayor Chávez kicking-off Air Aware on April 7, 2004. This initial implementation consisted of voluntary gas cap checks. During June 2004, 80 Air Care stations were given vouchers to use as necessary during annual vehicle emission testing of vehicles registered in Bernalillo county.

## Results

During the six month implementation period, **641** gas caps were exchanged at a cost of **\$5,156.61**; average cost of a gas cap was \$8.04. Results of gas cap failures were tracked and the largest percentage failed due to leaks (78%). Gas caps that failed because they were off-specification, missing, or for other unspecified reasons were also tracked. Figure 8, on the following page indicates the percentage for each category.

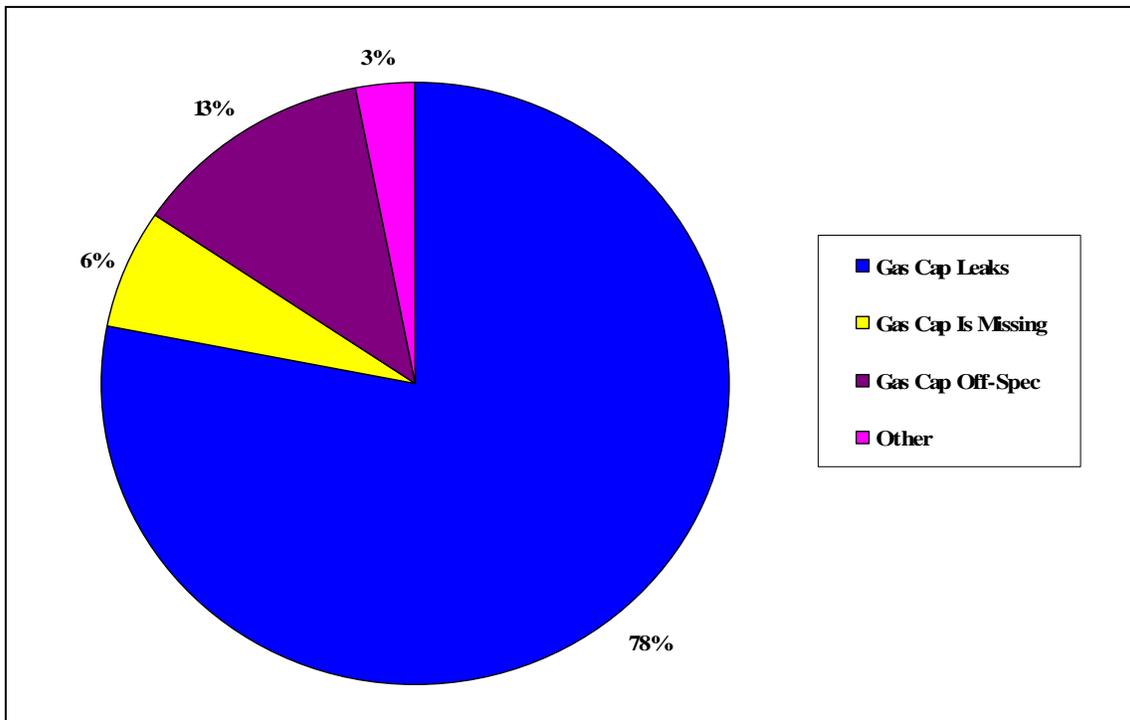


Figure 8. Reasons for Gas Cap Failure and Subsequent Exchange

Figure 9 indicates the amount of vouchers that were exchanged at Air Aware Partners located throughout Bernalillo county. It should be noted that Pep Boys, NAPA, and Carquest auto parts have numerous retail locations in comparison with dealerships that are single sites.

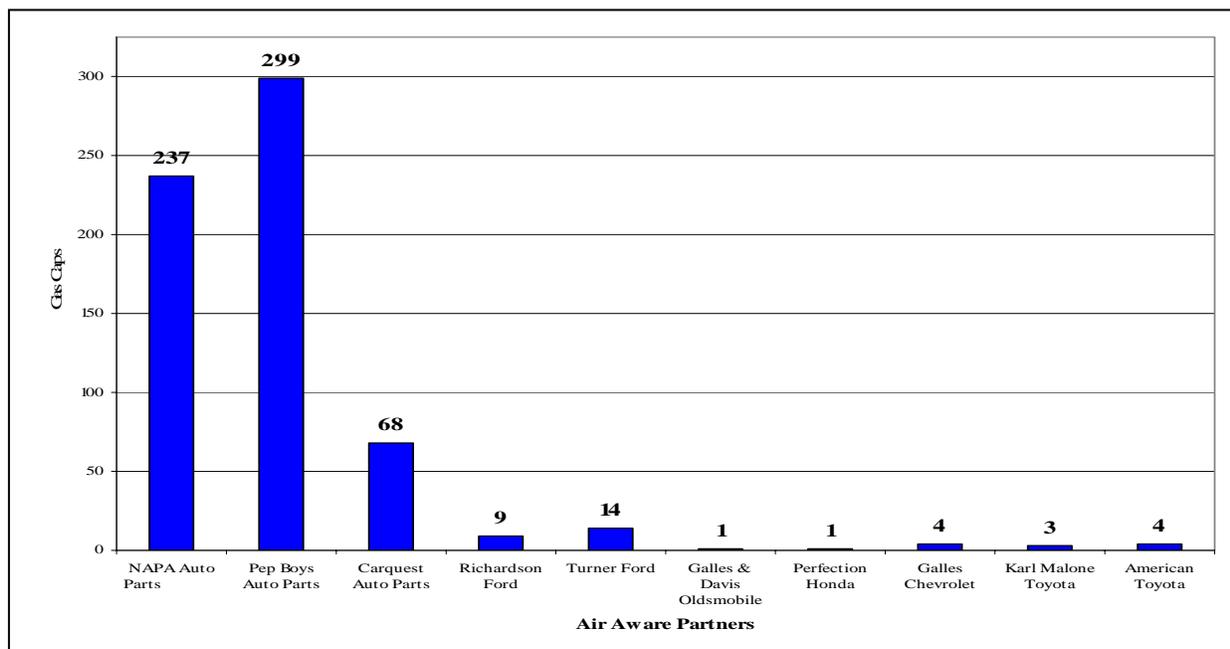


Figure 9. Number of Gas Caps Exchanged by Air Aware Partners

An interesting comparison also exists regarding the most frequent Style of Vehicle for gas cap exchange or **failure**. Figure 10 shows the most frequent body style was trucks.

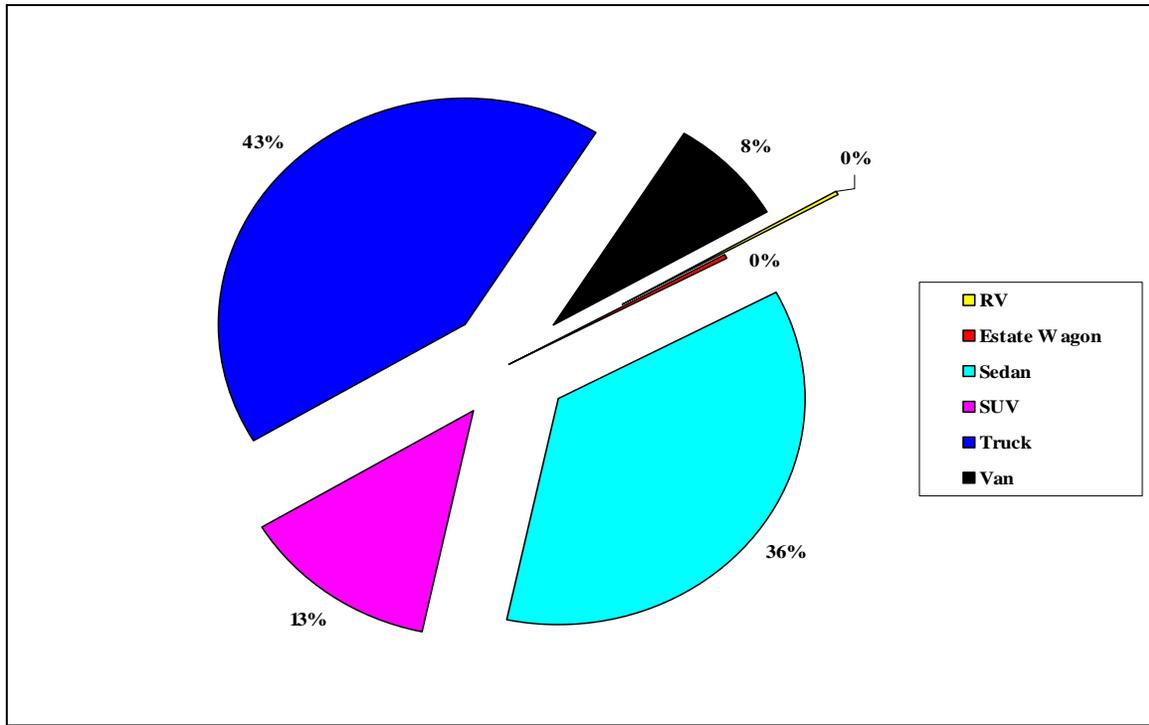


Figure 10. Gas Caps Exchanged – Vehicle Style

### Success

The success of the project is the community’s increased awareness of protecting our ambient air resource. This cannot be measured by any standard means. This project benefited from being implemented during the “*Let’s Breathe Easy!*” campaign spearheaded by City of Albuquerque Mayor Martin J. Chávez. This campaign was supported by radio, television, internet, movie theater advertising, as well as print media in the local newspapers. The awareness raised by both initiatives captured the attention of the community.

### Lessons Learned

An area where improvement can be achieved involves the “purchase or exchange of a voucher for a gas cap at the counter” process. Customer service education for Air Aware Partner staff was a challenge. The number of staff at each location and the unfamiliarity with the project presented complications with paperwork. A solution may be achieved by either narrowing the number of Partners or providing more training. Since time is an expensive resource that cannot be *required* from businesses that are volunteering their time and materials, it is recommended that the number of Air Aware Partners be limited.

The project was initiated on March 1, 2004 because that date coincided with the advertising campaign (poster and bus panel displays) and when the partners were ready. Mayor Chávez was interested in supporting our project and the decision to provide additional media attention was welcomed. The initial response from the public was enhanced by the Mayor's press conference, resulting in an increase in public participation.

In addition, in June 2004, the Vehicle Pollution Management Division recommended that vouchers be distributed to the Air Care Stations that had recently upgraded their equipment to the (BAR 97) emission testing equipment that complied with new testing requirements that include a gas cap check.

Figure 11 shows the project's timeline and the number of gas caps distributed during the project's implementation. It shows increases in participation in May 2004 and a larger increase in late June 2004, when the vouchers were distributed to customers during annual emission inspections for vehicle registration purposes.

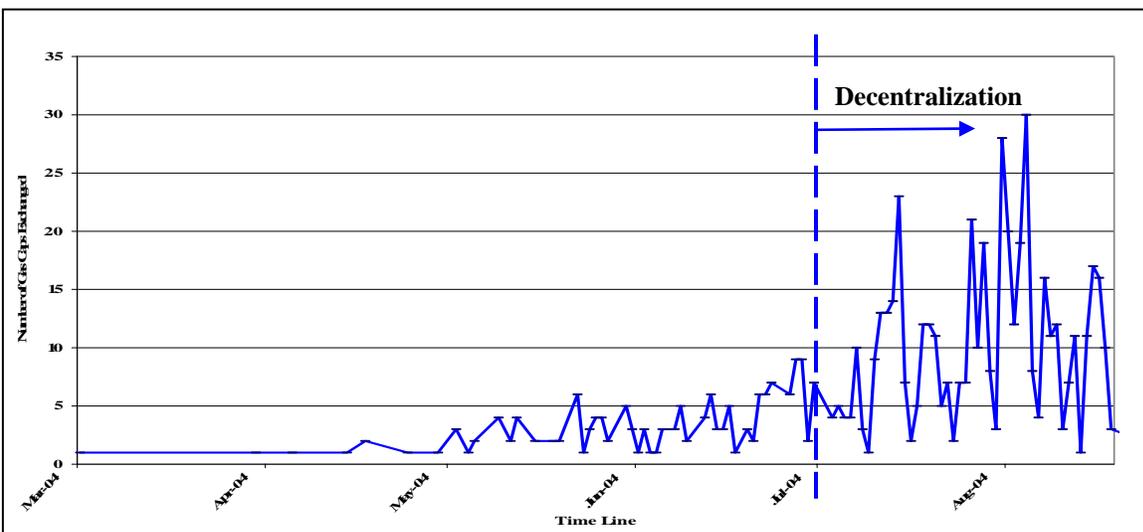


Figure 11. Project Time Line

## Conclusion

The Air Aware project is an important initiative because this air shed is within 91% of the National Ambient Air Quality Standard for the 8-hour National Ambient Air Quality Standard for ground-level ozone. Gas caps can leak volatile organic compounds (VOCs) into the air, contributing to the formation of ground-level ozone.

According to the Summer 2000 study "Air Quality Emission Reduction Analysis for the Regional Ozone Action Program," conducted by the Regional Air Pollution Control Agency (RAPCA), a VOC emission savings of 192 tons is projected for 2000 gas caps. Our goal of 1000 gas caps was a realistic goal for Bernalillo county. We met that goal by 64%; which may have reduced the VOC emissions by 58.8 tons.

The community's awareness of issues related to ground-level ozone was increased. Their participation in the preservation of Bernalillo county's ambient air quality is quantifiable and they received a gas cap for free or for a reduced cost, ultimately saving them fuel and money.

Long term awareness is a task that always presents itself; to educate the community so that they understand the importance of a quality air resource and can actively participate in protecting it. Staff continues to work at improving community awareness by using our new web site [www.cabq.gov/airquality](http://www.cabq.gov/airquality) and publishing education in the Air Shed Newsletter and Air Notes outreach initiatives.

## **Article A**

### **Air Aware Gas Cap Voucher**



Martin J. Chávez, Mayor



Auto Number

GAS CAP EXCHANGE VOUCHER

City of Albuquerque
Environmental Health Department
Air Quality & Vehicle Pollution Management Divisions
P.O. Box 1293
Albuquerque, NM 87103

For more information contact Therese Martinez-Loner
Phone: 768-1970 Email: tloner@cabq.gov

The maximum value of this voucher is \$10.00 towards the purchase of one gas cap.
It can be redeemed at any of the local Air Aware Partners listed below for partial or full value.
Redemption for more than the face value constitutes fraud and will not be reimbursed.

- AMERICAN TOYOTA, AUTOZONE, BOB TURNER'S FORD, CARQUEST AUTO PARTS, CASA CHEVROLET, DON CHALMER'S FORD, GALLES CHEVROLET, GALLES & DAVIS GM PARTS, KARL MALONE TOYOTA, MELLOY DODGE, NAPA AUTO PARTS, PARTS PLUS, PEP BOYS, PERFECTION HONDA, RELIABLE CHEVROLET, RICH FORD, UNIVERSITY VOLKSWAGEN MAZDA, ZANGARA DODGE

Do not write below this line. This area is for Vehicle Pollution Management Division use only.

Gas Cap Exchange Participant Information

Vehicle Make \_\_\_\_\_ Model \_\_\_\_\_

VIN Number \_\_\_\_\_ Year \_\_\_\_\_

Gas Cap Leaks [ ] Gas Cap Off-Spec [ ]

Gas Cap is Missing [ ] Other \_\_\_\_\_

Attention: Air Aware Partner—

Please attach copy of invoice to original white voucher indicating gas cap redemption cost.

Original- White AQD

Yellow - Air Aware Partner

Pink- VPMD

## **Article B**

### **Air Aware Orientation Letter**



Martin J. Chávez, Mayor

**City of Albuquerque**  
Environmental Health Department  
Air Quality Division  
11850 Sunset Gardens S.W.  
Albuquerque, New Mexico 87103



Alfredo R. Santistevan, Director

**Dear Air Aware Partner:**

Thank you for your participation in the Air Aware/Gas Cap Exchange program. Attached is the (tricolor-NCR) voucher.

The **public participation process** will work as follows:

- Public notification using poster/bus board advertising (I provided copies to you yesterday)
- Respondents will be asked to proceed to the Vehicle Pollution Management (VPMD) Center at 1500 Broadway Blvd. for a free gas cap check
  - If their gas cap is faulty, missing or off-spec, they will be given a voucher (face value \$10.00) to use at any one of the more than 40 Air Aware Partnering sites (see Voucher).
  - If their gas cap is operating **correctly**, they will be receive information regarding the importance of checking and maintaining their gas cap and vehicle and how these steps help to minimize the production of ozone and particulate material.

The project will continue until the funds for gas caps (1000) have been exhausted.

The **Air Aware Partner reimbursement process** will work as follows:

- The white voucher copies will be forwarded to me as vouchers are distributed to Gas Cap Participants.
- Pink copies will be retained by VPMD and cross referenced to White copies as they are processed. This will provide good reference for the public's actual participation.
- Each Air Aware partner will contact me regarding their (yellow) voucher reimbursement. I will either pick them up or they will deliver them to me.
- Yellow vouchers will be accompanied by original receipts from the partners for reimbursement.
- After documentation is complete, the yellow vouchers will be taken to Accounts Payable for accounts payable processing.

All final copies and accounting will be included in a report to Management and EPA.

Thank you for your time and consideration.

Therese Martinez-Loner  
Community Liaison  
Albuquerque Environmental Health Department  
Air Quality Division  
Education, Outreach & Technical Assistance Section  
Phone (505) 768-1970

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMODATION EMPLOYER