



REGIONAL AIR QUALITY COUNCIL

Smoking Vehicles in the Colorado Front Range - Some History and Options

Introduction

Passenger cars and trucks with visible, high emissions - typically referred to as smoking vehicles - make a significant contribution to air pollution in the Denver region. By some estimates, they contribute up to 25% of fine particulate matter (PM_{2.5}) emissions in the urban core.

To date, efforts to reduce pollution from smoking vehicles have not adequately addressed the problem. The following history of smoking vehicle programs in Colorado and along the Front Range identifies some of the challenges and opportunities associated with such programs. RAQC staff recommends that the Council form a work group to assess options for better identifying and addressing the problem of smoking vehicles.

The RAQC and Smoking Vehicles - Some History

Throughout its history, the Regional Air Quality Council has considered the problem of smoking vehicles and their contribution to air pollution. The RAQC has undertaken several actions designed to address the problem of smoking vehicles:

- With a grant from Total Petroleum, the RAQC implemented the “Cash for Clunkers” Buy-Back program in 1993/94. This program identified high-emitting and smoking vehicles and paid individuals to remove these vehicles from use.
- In 1993 the RAQC examined an effort to disallow high emitting vehicles from driving on high pollution days. The proposal was withdrawn after public testimony and opposition to a program that was seen to unfairly target low income citizens.
- *The Blueprint for Clean Air* (1999) includes a recommendation to “increase efforts to reduce emissions from smoking vehicles.” Public outreach undertaken as a part of *The Blueprint for Clean Air* consistently identified the need to address smoking and high emitting vehicles.

- In its **Discussion Paper Addressing the Problem of High Emitting and Smoking Vehicles Operating in the Denver Metropolitan Area** (1/6/2000), the RAQC indicates that such vehicles, while clearly not a large number, may have such a disproportionately high level of emissions that the public continues to clamor for strategies designed to address them.
- In a report to the Governor entitled **Options to Reform the Current Inspection and Maintenance Program** (8/30/2000), the RAQC makes a series of recommendations to address high emitting vehicles, including adding a high emitter identification and enforcement component to the I/M program.

Despite this recognition that more needs to be done to address smoking vehicles, little has been done to actually improve enforcement of current laws or deal specifically with high-emitting or smoking vehicles in a more comprehensive fashion.

Smoking Vehicles and their Contribution to Air Pollution

Smoking vehicles continue to be a part of the air pollution problem. In 1998, the Northern Front Range Air Quality Study (NFRAQS) final report stated that about 13% of the PM_{2.5} in the Front Range is caused by high emitter exhaust. This is one of the top three sources of PM_{2.5}. Road dust and ammonium nitrate are the two other significant sources of PM_{2.5}. High emitter emissions account for approximately one-fourth of the measured PM_{2.5} in the urban core of the Denver metro area. Additionally the NFRAQS study reports that “on average, PM_{2.5} emission rates from smoking vehicles are at least 100 times those from new and well-maintained vehicles.”

Fine particulate matter is the primary source of the metro area’s wintertime visibility problem known as the Brown Cloud. Reducing PM 2.5 from smoking vehicles will contribute to better air quality, enhanced visibility and related improvements in public health.

Smoking Vehicle Standards

Throughout the country, and in Colorado, the enforcement of laws regarding smoking vehicles has not been politically popular. Individuals who drive smoking vehicles are often those in the lower economic scale who cannot easily afford to fix their vehicles. Therefore, most states and localities have chosen to use voluntary means to secure compliance with smoking vehicle laws.

Colorado has one of the strictest laws governing visible vehicle emissions of any of the 50 states. Colorado law prohibits any visible smoke from gasoline-powered vehicles and limits diesel smoke to varying levels according to vehicle and engine type. The standard for tailpipe emissions in other states varies from either five seconds of visible smoke to 10 seconds, with the exception of Nevada where the standard is “an uninterrupted stream of visible emissions of exhaust . . .” for a gasoline-powered engine.

Efforts to Reduce Emissions from Smoking Vehicles in Colorado

Colorado Department of Public Health and Environment (CDPHE) - Smoking Vehicle Hotline and Voluntary Enforcement

For a number of years, the CDPHE has implemented a smoking vehicle hotline which allows individuals to make a complaint against a smoking vehicle either by phone or on the internet. As a result of the hotline, CDPHE Mobile Sources Division staff sends about 400 to 500 license plate numbers each month to the Colorado Division of Motor Vehicles.

Staff from the Colorado Division of Motor Vehicles uses the information on the complaint form to identify the name and address of the vehicle owner. About 84% of the complaints that are made are accurately matched with a vehicle. If the information that is returned from the Division of Motor Vehicles is matched to the information on the complaint form, and if the vehicle is not in the first four model years of its life, Mobile Sources staff at CDPHE sends a brochure to the registered owner of the vehicle.

The smoking vehicle brochure informs the motorists that a complaint has been made against the vehicle. It explains how smoking vehicles contribute to air pollution problems and related health problems. The brochure encourages the individual to take advantage of a free smoke analysis at one of the Colorado Department of Public Health and Environment's Emission Technical Centers and gives the addresses in the Denver-metro area, Colorado Springs and Fort Collins. Additionally, it includes information on likely causes of different types of smoking vehicle problems and how they can be repaired. The CDPHE brochure informs the motorist that they may be ticketed if the violation continues.

The hotline generated a total of 5,360 complaints in 2000. As a result, the Mobile Sources Division staff sent out 3,542 brochures. The Mobile Sources Division staff currently does not follow up with the motorists who receive the brochures. With few exceptions, enforcement has not historically been a high priority for local police or for the Colorado State Patrol.

City and County of Denver – Smoking Vehicle Program

The City and County of Denver has been the most aggressive community in Colorado regarding enforcement of smoking vehicle laws:

Denver has had a local ban on smoking vehicles since 1979. While the program addresses visible emissions from tailpipes, it began as a means of addressing the carbon monoxide problem Denver was experiencing in the 1970s.

According to the Denver ordinance, gasoline vehicles may not emit visible smoke from the tailpipe for more than five seconds and diesel vehicle engines may not emit visible smoke in excess of 20% opacity (the amount of light blocked by a medium) for more than 10 seconds.

Denver uses trained smoking vehicle program officers to observe smoking vehicles. These officers are City employees with other responsibilities who are trained to look for smoking vehicles. They are allowed to issue a summons to appear in environmental court.

In order to avoid a court appearance the owner of a smoking vehicle may:

- Prove the vehicle has been brought into compliance with the City Ordinance through a free visual inspection;
- Repair the vehicle and show proof of repair and pass a free visual inspection;
- Surrender the license plates so the vehicle cannot be driven or parked on city streets; or
- Sell the vehicle and inform the new owner through a notarized letter the vehicle does not comply with City Ordinance.

In 1999 the City's Mobile Sources Program staff sent out 812 letters regarding smoking vehicles including 446 summonses to appear in court. In that same year about 63% of those vehicles that received a summons were removed from active driving in the City or repaired. Additionally, Mobile Sources Program staff sent out another 366 courtesy letters to individuals for whom a non-trained observer had made a smoking vehicle complaint.

City of Fort Collins – Smoking Vehicle Pilot Project

The City of Fort Collins recently completed a pilot program to enhance smoking vehicle enforcement. A Congestion Mitigation and Air Quality Management (CMAQ) grant funded the effort. The Fort Collins program had two dimensions:

- a citizen complaint hotline, and
- a process for trained city employees to observe smoking vehicles.

The staff sent a sternly worded letter to those citizens whose vehicle was observed by a trained employee to be emitting visible smoke. The owners of those vehicles were told that they must repair their vehicle and provide the City with proof of such repair. A less sternly worded letter was sent to those individuals whose vehicle was brought to the City's attention by citizen complaint.

In the nine months of the program, trained employees observed 75 smoking vehicles in the City. In addition, Fort Collins Police report issuing eight citations for smoking vehicle violations in the last year. Only four individuals provided the City with verification of repair.

As a result of the pilot program, city staff is working to enhance future efforts and have formed a staff level task force to examine further options. According to Lucinda Smith, program coordinator, the City of Fort Collins must either put teeth behind its enforcement or drop the project altogether.

Other Colorado Enforcement Efforts

In Boulder, as in Denver and Fort Collins, special enforcement officers are trained to identify smoking vehicles. These code enforcement officers handle other environmental enforcement responsibilities as well. The Boulder environmental enforcement officers wrote approximately 100 citations for smoking vehicles in 2000. By contrast, they wrote less than ten so far in 2001 because of a different emphasis for these officers in the current year. Additionally, Boulder sends letters to vehicle owners on whom a smoking vehicle citizen complaint has been made.

Elsewhere in Colorado, the number of citations issued last year by the Colorado State Patrol (37) and the Colorado Springs Police Department (29) indicates that smoking vehicle enforcement is not high on the priority list for law enforcement activity. Communities may be relying on the CDPHE hotline program as their primary enforcement mechanism.

Programs in Other States

A sampling of research into smoking vehicle enforcement nationally indicates that most states and their local jurisdictions have a program similar to the program run by the CDPHE with a hotline and voluntary compliance. However, there are a couple of notable exceptions.

Nevada

Nevada has the strongest state level program for enforcement of their smoking vehicle law. The State of Nevada rescinds motor vehicle registrations for violations of state smoking vehicle laws identified by enforcement officers or Department of Motor Vehicle employees.

Prior to suspending the vehicle's registration, the Department staff makes several attempts to contact the owner and require them to fix the vehicle. Individuals may stop the procedure to rescind their registration through proof of compliance. In Las Vegas in the year 2000, 470 individuals had their registration rescinded as a result of this program.

Southern California

Southern California's program is similar to the State of Colorado's Hotline Program. However, the South Coast Air Quality Management District (AQMD) publication to citizens indicate that the District can levy a fine up to \$250 for a smoking vehicle.

Staff believes that their primary enforcement mechanism is through an advisory letter and compliance form. The advisory letter and compliance form is sent to the owner of the vehicle on which a complaint is made. According to their cumulative data, "on average more than 40% of the vehicle owners who receive an advisory letter return their completed compliance forms to the AQMD, stating that they have attended to their vehicle, either having it checked and if warranted having any needed repairs made."

Summary and Recommendations

Both in Colorado and nationwide, the trend in smoking vehicle programs has been voluntary enforcement of smoking vehicle standards. On a statewide level only Nevada provides more than voluntary enforcement. However, the City and County of Denver has a long history of a successful enforcement program. Deborah Kielian, Program Manager with the City and County of Denver, believes the Denver program to be one of the most cost-effective means of eliminating air pollution that the City has available.

In order to determine how best to pursue further enforcement of smoking vehicles, RAQC staff recommends that the Council form a Smoking Vehicle Work Group to explore further options and draft recommendations.

The Work Group should be composed of representatives of local governments throughout the metro area, as well as staff from the Department of Motor Vehicles, CDPHE, and the Colorado State Patrol. The work group should also be open to all others who want to participate.

If the RAQC should recommend that the region go beyond voluntary compliance, such a recommendation will generate controversy. By involving stakeholders in the process of researching and reviewing recommendations and by analyzing costs and benefits, controversy can be minimized.

The agenda for the Work Group should include the following topics:

Administrative - The work group should consider the structural, organizational and intergovernmental elements of how to handle the hotline, and how to contact smoking vehicle owners. Additionally, the work group should address the increase in workload that enhanced enforcement may generate for the Department of Motor Vehicles and law enforcement agencies.

Enforcement - The work group should examine different ways of identifying smoking vehicles and enforcing the law. Some local communities have code enforcement officers or environmental officers that can serve as models. The work group should also examine citizen complaints vs. trained-responder complaints and the different methods for handling each.

Political - There are many decisions regarding the enforcement of smoking vehicles that fall in the realm of public policy. In order to address the public policy issues it may be helpful for the work group to answer the following questions:

- How can the State or local government get smoking vehicles off the road without unduly creating a burden on the poor?
- Is the state standard sufficient?
- Are there programs that could be put in place to assist low income persons in fixing or replacing their vehicles? How could those programs be funded?
- Should penalties be implemented through local ordinances, through a state penalty or through vehicle registration restrictions?

Public Education - If the work group should decide to go forward with new recommendations regarding smoking vehicles, a public education and information campaign will be essential. Citizens will need to understand why the new program has been put in place and how it might affect them. The work group will need to address these public education issues.

Relationship to Remote Sensing – The expected implementation of the clean screen remote sensing component of the state's inspection/maintenance program offers the opportunity to identify high emitting vehicles as well. The work group should address how a high emitter component, with effective enforcement, can be added to the program and how it relates to the identification of smoking vehicles.