



Environmental Fact Sheet

Transportation Control Measures

Transportation Control Measures (TCMs), which have been in use for several decades to control traffic congestion on major streets and highways, are becoming increasingly popular as means to reduce net vehicle emission by encouraging changes in the ways people travel.

What are Transportation Control Measures?

TCMs include a wide variety of measures used to reduce motor vehicle emissions, primarily by reducing the total amount of vehicle miles of travel (VMT) in an area. A few examples of TCMs include mass transit improvements, ridesharing arrangements, telecommuting and work schedule changes, parking management, and roadway tolls. Mile for mile, most emissions from a car trip occur during the first 15 minutes a car is running—the time when the emissions control devices are not fully warmed up. Therefore, transportation control strategies that eliminate or reduce short trips have the most emissions benefits.

It is clear how ridesharing and transit use reduce trips. Some other transportation control measures are perhaps less obvious in how they reduce emissions. Telecommuting allows a person to work from home or a satellite work station closer to home than the normal work site. Parking management can contribute to emissions reductions in several ways. For example, reduced rates for carpool or vanpool parking can provide an incentive for people to use those modes of travel.

Congestion pricing is an example of a market-based strategy whereby there is a higher charge to use a stretch of road during peak travel times. This is similar to the way airlines and telephone companies adjust prices according to amount of demand. As a result, transit and ridesharing are given a more equal economic footing compared to solo-driving; consequently, more people would be expected to choose those ways of traveling, thereby reducing emissions.

Why the interest in TCMs?

Technological improvements that have been made to motor vehicles' emissions control systems since 1970 have resulted in substantial reductions in vehicle emissions on a per mile basis. However, technology has reached a point where further refinements to emission controls would produce only minor reductions in emissions, and at a large cost. Meanwhile, the number of vehicles on the road, and the number of miles they are driven, has been increasing dramatically at the same time.

If present trends continue, the increase in vehicle emissions due to increases in the total number of vehicles on the road, and the amount they are driven, will overwhelm the benefits gained from improved emission controls on vehicles. As a result, viable alternatives to single-occupant driving need to be available and used in order to ensure the healthy air quality we all need and to maintain the personal mobility we all depend on.

How is the use of TCMs encouraged?

Although EPA has no rules or regulations requiring that states or cities implement TCMs, it is recognized that states face enormous challenges to develop air quality control programs. States are required to develop State Implementation Plans (SIPs) that demonstrate how the area will reduce emissions and meet air quality standards. Many traditional methods have proven benefits. However, due to the complexity of air quality problems, additional measures are needed in many places.

This is where TCMs are beneficial. Because TCMs have only recently been viewed as tools to improve air quality, their environmental benefits are still being analyzed. EPA is gathering information on the effectiveness of TCM programs, either individually or in combination, in im-

proving air quality so that they can be used to the best effect. Many areas have moved ahead in implementing a variety of TCMs such as employee ridesharing programs, guaranteed ride home programs, transit improvements, and others. In a number of areas around the country, TCMs are used as part of episodic control programs, often called “Ozone Alert,” or “Ozone Action” programs.

EPA is developing guidance that will help more areas implement such programs and take credit for them in their efforts to meet air quality standards. EPA has also been working through its “Transportation Partners” program to encourage effective and innovative transportation alternatives through grants and awards.

For Further Information

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Information on episodic control programs can be found on the EPA Internet World Wide Web (WWW) site at:

<http://www.epa.gov/oms/reports/episodic/study.htm>

Information on the Transportation Partners program can be found at:

<http://www.epa.gov/oppe/tp/>

This fact sheet and additional information on transportation and air quality are available at:

<http://www.epa.gov/oms/traq>