

Transportation Control Measure (TCM) Summary Assessment

TCM Definition: Improved Public Transit, MARTA Transit Incentives

ARC Project Number: M-AR 231

TCM Project/Policy Description:

This is an employer-based program through which employees are offered reduced-cost TransCards to encourage alternatives to driving alone. However, it is anticipated that this program will not be implemented until 1998 and therefore, air quality benefits will not be realized until the 1999 analysis period.

TABLE 1.0 SUMMARY OF AIR QUALITY IMPACTS

Year	1999	2005	2010
HC Reduction Tons/Day	0.066	0.053	0.048
NOx Reduction Tons/Day	0.067	0.061	0.060

Assumptions:

- (a) 3,041 TransCards sold (see Note 1 below)
- (b) 80% usage (10% non-use, 10% current riders at new companies) (see Note 1)
- (c) 100% Work Trips, 20% Cold Starts
- (d) 60% Peak Highway Speed (36.8 mph), 40% Peak Off-Highway Speed (21.1 mph)
- (e) 1.16 Vehicle Occupancy
- (f) Average Work Trip Length of 13 Miles Each Direction (see Note 2)

Calculations:

MARTA estimates indicate that the introduction of reduced-fee TransCards to new Atlanta businesses will result in 3,041 cards per month being sold. This equates to 4,866 SOV trips reduced each day. This trip reduction will result in a daily reduction of 54,535 VMT. VMT reductions applied to the appropriate emissions factor will result in the amount of pollutant reduction per day. Pollutant reductions are summarized in table 1.0. These calculations are summarized in the following expressions:

$$\begin{aligned}\text{New Cards} * 80\% &= \text{New Riders with Cards:} \\ 3,041 * .80 &= 2,433\end{aligned}$$

$$\begin{aligned}\text{New Riders with Cards} * 2 &= \text{Work Trips:} \\ 2,433 * 2 &= 4,866\end{aligned}$$

$$\begin{aligned}\text{Work Trips} / \text{Vehicle Occupancy Rate} &= \text{Trips Reduced Per Day:} \\ 4,866 / 1.16 &= 4,195\end{aligned}$$

$$\begin{aligned}\text{Trips Reduced Per Day} * \text{Average Trip Length} &= \text{VMT Reduced Per Day:} \\ 4,195 * 13 &= 54,535\end{aligned}$$