



Travel Characteristics

The [Travel Characteristics Technical Report](#), dated August 8, 2006, provided basic travel information for the general population using Michigan's transportation system. The report characterized travel based on user attributes and objectives through the use of descriptive statistical methods. Data from the 2004/2005 [MI Travel Counts](#) I (MTC I) program was the foundation of the travel characteristics analysis.

Key results discussed in the *Travel Characteristics Technical Report* answered four high-level questions: (1) who travels in Michigan, (2) why people travel in Michigan, (3) how people travel in Michigan, and (4) when people travel in Michigan. Special analysis also provides information regarding long distance trips and the implications of travel characteristics for the development of an integrated transportation system.

The purpose of this white paper is to highlight the changes in household travel behavior characteristics since the MTC I study. The MI Travel Counts II (MTC II) program was undertaken by the Michigan Department of Transportation (MDOT) to update information on statewide household travel characteristics during the fall of 2009. The MTC II data provides opportunities to gauge how household travel has changed in Michigan since 2005.

Data Sources

Between the completion of MTC I and 2009, the economy declined and travel decreased statewide. In order to determine how much of the reduced travel seen on the roadways was a function of changes in household travel; MDOT undertook the [MI Travel Counts](#) II (MTC II) study. MTC II collected travel data in 2009 from a subset of households, which responded to MTC I in 2005. MTC II data provided opportunities to gauge how household travel has changed in Michigan since the completion of MTC I.

Aggregations of the 2004/2005 MTC I dataset, based on trip-makers' personal and household characteristics, were used to derive basic travel characteristics. Records were grouped by: similar activities into the same trip purpose; similar transportation types into common trip modes; individuals into age groups; and long distance trips into destination regions. The report summarized the total number of trips by categories of: geographic sample area, personal characteristics, household characteristics, trip purpose, mode of transportation, and destinations.

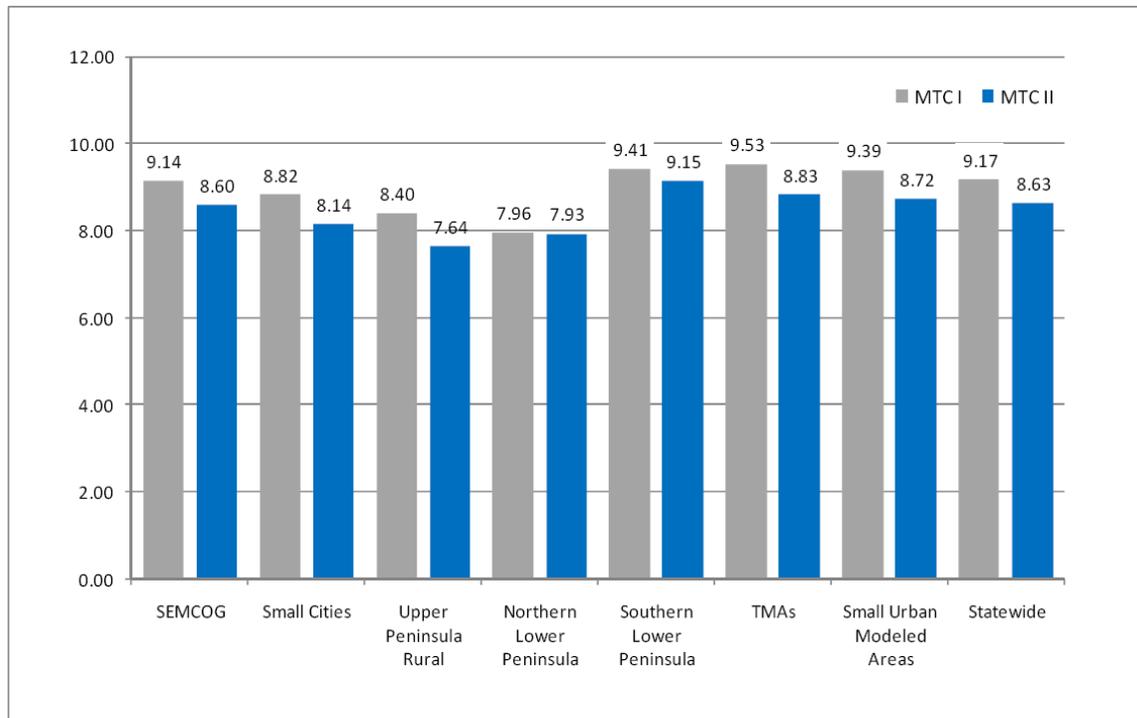
MTC I information reflects the base year of the 2005-2030 *MI Transportation Plan*. In addition, MDOT Permanent Traffic Recorder (PTR) data provided monthly and weekly traffic patterns on the state trunkline roads. Tourism-related employment, second homes, and visitor person day data used in analysis of seasonal traffic pattern locations was obtained from the U.S. Bureau of Economic Analysis, U.S. Census, and Michigan State University Extension.

Due to a change in the survey methodology and a smaller sample size, the results of MTC II are not directly comparable to the information presented in the *Travel Characteristics Technical Report*. However, as part of the MTC II program, an analysis and [report](#) was prepared to identify if changes in household travel resulted in the reduced travel on Michigan roads. This report compares the travel reported by respondents in MTC II to MTC I and the 2009 National Household Travel Survey (NHTS). While the methodology to group, clean, and aggregate the data is different from the analysis completed for the *Travel Characteristics Technical Report*, both use the same base data. The [2009 Comprehensive Household Travel Data Collection Program Comparison Report](#) will be the source for identifying any changes in travel characteristics occurring since 2005.

Key Findings

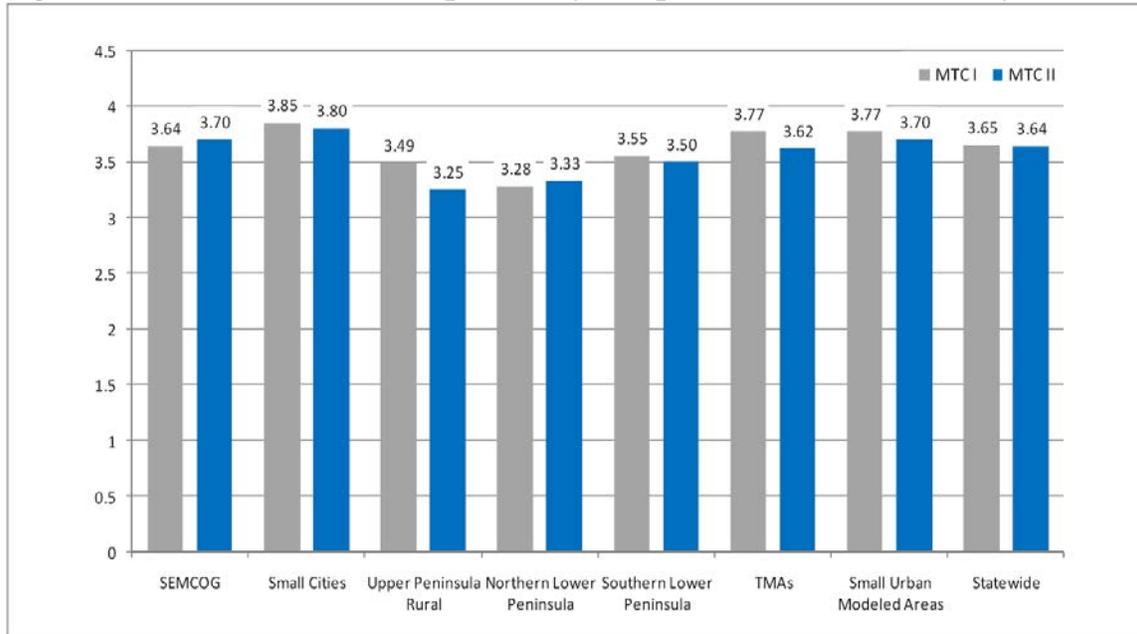
- The daily trip rate per household in the MTC II survey was 8.63 trips compared to 9.17 trips per household reported in the MTC I survey and 8.46 trips per household in the 2009 NHTS. (See Figure 1) However, the statewide person trip rates were nearly identical across the MTC surveys and the 2009 NHTS (3.65 in MTC I, 3.64 in MTC II, and 3.65 in the NHTS respectively). This indicates that between the MTC surveys, person-trip making did not change while changes occurred in household structure. (See Figure 2)

Figure 1: Household Level Total Trip Rates by Sample Area and MTC Surveys



- In the small urban and rural areas of the state, between 2004 - 2005 and 2009, there was an increase in shorter trips and a decrease in longer trips.
- The number of long-distance trips per household taken in the three months prior to the survey was consistent between MTC I and MTC II, while the annual rates of long-distance trips decreased by about 15 percent for MTC II.

Figure 2: Person Level Total Trip Rates by Sample Area and MTC Surveys



- Daily time spent on non-mandatory activities, such as dining out or recreation, were reduced substantially (by 45 minutes per household) in MTC II. Though this change did not impact travel, it is an indication of a change in priorities as a result of the poor economy.

Conclusion

Overall, household travel is relatively the same in 2009 as it was in 2004 - 2005. Based on the survey estimates, changes in traffic volumes are more likely to be related to changes in household size and structure (a reduction in household size and resulting trips per household) rather than changes in trip making or changes in activities. In addition, two minor changes in household travel that may have contributed to a decrease in statewide travel include an increase in shorter trips (at the expense of longer trips), and a reduction in long distance trips.