Examining Travel Patterns and Characteristics of Transit Users in New York State

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Abstract

This study, conducted by Oak Ridge National Laboratory researchers in support of the New York State Department of Transportation, aimed at using the 2009 National Household Travel Survey (NHTS) data, in conjunction with related spatial data sets, to examine characteristics and travel patterns of transit users within New York State (NYS). The study also intended to identify any specific differences between transit users and non-users.

Along with NHTS data, this study utilized NYS transit system General Transit Feed Specification (GTFS) data, which was converted by the research team from its native format into a Geographic Information System for analysis and visualization purposes. To measure the significance of transit systems within NYS, available GTFS data were spatially analyzed against the LandScan population dataset to determine the proportion of NYS population within selected distances from available transit stations. Note that LandScan contains the finest population distribution data available at about 1 km (30-meter x 30-meter) resolution, allowing more precise estimates of population within selected radii of transit stations. This effort led to the creation of several NYS transit sheds (e.g., 1-mile).

Specific issues addressed include: Are there demographic differences between travelers who used/did not use transit? How does transit usage compare with the population at large? What are the regional or spatial differences (e.g., living in or outside of a specific transit shed)? Are there any unique travel characteristics or patterns that exist for transit users? Potential influence of New York City transit systems and population on statewide analysis, and results, was also considered in this study.