

2017 NHTS Version 1.2 Release Notes

August 2020

Version 1.2 of the 2017 NHTS is being released to accomplish several objectives, including:

- Adding an adjusted TRPMILES variable to the trip file that accounts for differences in calculated vs. estimated distance travel for use in analyzing trends with past NHTS surveys
- Adding variables provided by EIA on fuel economy and fuel use to the vehicle file
- Adding variables from Claritas, LLC (Claritas) to the trip file to enhance location details about the origins and destinations of travel
- Adding VEHTYPE to the trip file
- Minor change to the PTUSED variable in the person file

1. Adjusted Trip Mileage Variable

An adjusted trip mileage variable, TRPMILAD, has been added to the Version 1.2 trip file. This variable can be used to compare items such as Person and Vehicle Miles of Travel to similar metrics in prior NHTS releases and was used to produce 2017 **Adjusted** PMT and VMT estimates in the *Summary of Travel Trends: 2017 National Household Travel Survey*. The adjustment was made only to driver and passenger trips made in personal vehicles (determined by values of TRPTRANS 03, 04, 05, 06, 08, 09, and 18). For private vehicle work trips (where work is determined by WHYTRP90=01), TRPMILAD is 1.0735 times TRPMILES, and for private vehicle non-work trips, the adjustment factor is 1.1151. For more information, see Appendix A of the *Summary of Travel Trends: 2017 National Household Travel Survey*.

2. Variables on Fuel Economy and Fuel Use Provided by EIA

Version 1.2 adds variables calculated by the U.S. Energy Information Administration (EIA) including fuel economy for each vehicle in the vehicle file as well as fuel consumption and cost estimates, along with associated flags. The variable FEGEMPG is derived from the FuelEconomy.gov database, which contains real-world miles per gallon information for each vehicle. This differs from 2001 and 2009, where the CAFE database was used to create the variables EPATMPG (unadjusted fuel economy) and EIADMPG (adjusted for real-world use). FEGEMPG in the 2017 data is closest to EIADMPG for users interested in comparing values across surveys; however, any discrepancies are likely attributable to the change in underlying data and thus caution is urged before analyzing trends in this data.

For more information, see the documentation on these variables at <https://nhts.ornl.gov/documentation>.

3. Variables from Claritas in the Trip File

Version 1.1 added Claritas variables with household location-based density information to all files. However, the addition of Claritas variables based on household location to the trip file resulted in some confusion and possible misinterpretation of results. Therefore, Version 1.2 removes the Claritas variables from the trip file that described the home location and instead appends the density measurements associated with on the trip origins and destinations. The variable names are consistent with the household-based naming convention, with each variable starting with O for origin location information, and D for destination location information.

4. VEHTYPE added to the Trip File

The variable VEHTYPE has been appended from the vehicle file to give additional detail on the type of household vehicle used on a given trip. This information is consistent with TRPTRANS (Trip Mode, derived) for 99.5% of trips taken by a household vehicle. However, due to variation in responses to questions on vehicle type of a household vehicle versus vehicle type used on a given trip, as well as the exclusion of “Other Truck” from the TRPTRANS variable, both variables are now included on the trip file.

5. Minor Change to PTUSED

The variable PTUSED in the person file comes from the survey question “In the past 30 days, about how many days [\$HAVE_YOU] used public transportation such as buses, subways, streetcars, or commuter trains?” Despite the emphasis on days, several users answered with numbers higher than 30. In Version 1.2, this variable is capped at 30.

2017 NHTS Version 1.1 Release Notes August 2018

Version 1.1 of the 2017 NHTS was released to accomplish several objectives, including:

- Adding BESTMILE and associated flags
- Adding HBHUR and other variables from Claritas, LLC (Claritas)
- Adding imputed variables involving age and sex
- Revising the WHYTRP90 trip purpose variable
- Minor changes to the CARSHARE label and ANNMILES unreported values

1. BESTMILE and Associated Flags

Version 1.1 includes the addition of BESTMILE (Best estimate of annual miles) and the associated flags BEST_FLG, BEST_EDT, and BEST_OUT to the Vehicle file. For more information, see the BESTMILE documentation at <https://nhts.ornl.gov>.

2. HBHUR and other Claritas variables

Version 1.1 includes the addition of Claritas variable HBHUR and the update of density-related variables (HBHRESDN, HBHTNRNT, HBPPOPDN, HTEMPDN, HTHRESDN, HTHTRNT, and HTPPOPDN) from internally derived contents to data purchased from Claritas. This update of the density-related variables was done to provide internal consistency between the density-related variables and the HBHUR variable.

Variables in prior NPTS and NHTS surveys obtained from Claritas were not obtained for the initial release of the 2017 NHTS, in large part due to the availability of the same data from the American Community Survey (ACS). The Claritas variables were purchased after the Version 1.0 release, replacing the ACS-derived equivalents in Version 1.1. The sole variable not in Version 1.0 was HBHUR, an urban/rural indicator variable that, in 2009, contained values of Urban, Town and Country, Suburban, and Second City. This variable has been included in Version 1.1, with values of Rural, Small Town, Second City, Suburban, and Urban. In this sense, it more closely resembles the 2001 version of the variable than the 2009 version.

3. Imputed Age and Sex Variables

The initial release of the public use file contained values in R_AGE and R_SEX as reported by the respondent. The values of these variables are consistent in Version 1.1. However, there are a limited number of records for which no response was given to one or both questions concerning age and sex. For the purposes of weighting, Westat created variables R_AGE_IMP and R_SEX_IMP, which contain imputed values for each question when the respondent did not answer. These two imputed variables were not in Version 1.0 of the Public Use files, but are included in Version 1.1

4. WHYTRP90 Revision

Version 1.0 of the data contained inconsistencies with the traditional calculation of WHYTRP90, due to both changes in the WHYTO variable from 2009 to 2017, as well as the inclusion of loop trips in 2017. The following changes to WHYTRP90 were made in Version 1.1 of the data:

- If WHYTO was To Home (values 01 and 02) and WHYFROM was also To Home (01,02) and the trip was labeled a loop trip (LOOP_TRIP=01), combined with the mode being

walk or bike (TRPTRANS=01 or 02), WHYTRP90 was assigned a value of 10 (Other Social/Recreational), which is the typical value for this presumed exercise trip.

- The WHYTRP90 specifications dictated that if WHYTO was Buy Meals and was within a work trip window (meaning the meal was during a lunch break at work), that WHYTRP90 was set to Other Family/Personal Business (04), whereas if the trip was outside of work, it was set to Other Social/Recreational. If this was unable to be determined, typically because the respondent was out of town at some point during the travel day, WHYTRP90 was set to Other (11). In many cases in Version 1.0, trips to buy meals that could not have been in a work window were mistakenly assigned to Other (11) instead of Other Social/Recreational (10).

To correct this, if WHYTO was Buy Meals (13), and no work trip window was possible on the travel day (0-1 work trips, as defined by WHYTO, were taken, meaning the respondent either didn't work on the travel day, or went to work and went straight home without returning to work), the respondent began and ended their travel day at home, and the prior value of WHYTRP90 in Version 1.0 was set to Other (11), the value of WHYTRP90 in Version 1.1 was set to Other Social/Recreational (10).

5. Additional Minor Changes

Other small changes have been made, detailed below:

- The label for the CARSHARE variable has been corrected from "Count of Care Share Program Usage" to "Count of Car Share Program Usage," with the typo in the word "Car" corrected
- Values of ANNMILES that were set to -1 (Appropriate Skip) in Version 1.0 were changed to -9 (Not Ascertained) in Version 1.1. The questions used to derive ANNMILES were asked for all vehicles, so an appropriate skip was not possible.