



NextGen NHTS NEWSLETTER

Summer 2022

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NHTS Program Updates

The Federal Highway Administration’s (FHWA’s) Next Generation National Household Travel Survey (NextGen NHTS) program launched the first core data survey in January 2022, which will continue for 1 year. In addition, FHWA recently released the 2020 NextGen NHTS Origin–Destination (OD) Data Products as well as web-based tools for easy data summaries. Continue reading to learn highlights about each.



FYI! Under the NextGen NHTS program, FHWA funds the following resources:

- A biennial core data survey, the first of which is currently underway.
- Annually released NextGen NHTS OD Data Products, which consist of an individual product for both passenger and truck OD data.
- The NextGen NHTS OD Data Portal, which is where users can access the OD Data Products as well as web-based tools for assessing and summarizing the data.

NextGen NHTS Core Data Survey Launch

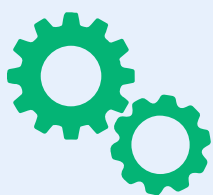
The NextGen NHTS program’s 2022 core data survey launched January 18, 2022, and will continue for 1 year. The survey design includes a traditional address-based sample (ABS) of 7,500 households and a parallel sample of 7,500 households from the Ipsos Knowledge Panel, which is a probability-based panel frame sample (PFS). The ABS results will serve as the official source

for statistics, while an independent evaluation team will compare the results between the two studies to help inform the use of PFS in future efforts.

In addition to the two parallel national surveys, the 2022 NextGen NHTS effort includes add-on samples purchased by the Tennessee DOT (5,000 households) and the Virginia DOT (11,000 households). The national survey design includes the core NHTS questions regarding demographics and travel day behavior as well as supplemental questions about the most recent long-distance trip, the impact of COVID-19 on travel patterns, and the use of emerging travel modes.

2020 NextGen NHTS OD Data Products Release

FHWA's 2020 NextGen NHTS OD Data Products, which consist of an individual product for both passenger and truck OD data, were released in June 2022. These data products are a source of national travel estimates that complement the traditional NHTS core data survey effort. The OD Data Products leverage in-vehicle and smartphone application-generated passive mobility data to summarize travel between 583 zones that encompass metropolitan statistical areas (MSAs) and non-MSAs within each State and the District of Columbia. The data products provide annualized trip counts for truck and passenger travel.



NextGen NHTS OD Data Resources

The following resources are available to help inform users how to use these tools:

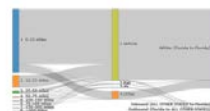
- [Quick Start Video](#).
- [FHWA 583 Zones](#).
- [2020 Passenger OD Product Methods Report](#).
- [2020 Truck OD Product Methods Report](#).

The 2020 OD Data Products were constructed from raw mobile-device-location and GPS-device data obtained from multiple data providers, with the data representing more than 270 million monthly active devices from across the country. The data streams were recorded as anonymized individual records that indicated the date, time, and latitude and longitude coordinates of location sightings for each device. The University of Maryland first preprocessed the data to remove duplicate records/devices as well as records that did not meet minimum quality standards. They then employed algorithms, based on previous academic research and industry best practices, to identify local and long-distance trips and to impute attributes to the passenger data.

For more information, to access the data and associated documentation, or to summarize the data using new tools developed for that purpose, please visit <https://nhts.ornl.gov/od>.

NEXTGEN NHTS OD DATA PORTAL AND WEB-BASED TOOLS

FHWA has sponsored the development of a data portal with two web-based tools to help users quickly access and summarize the newly released passive OD data. Users can access both the passenger and truck 2020 OD Data Products using these tools.



Data Summary

The [Data Summary tool](#) was created to provide users with a quick way to obtain high-level summary statistics for a specific State/zone or the entire Nation.



Visual Analytics

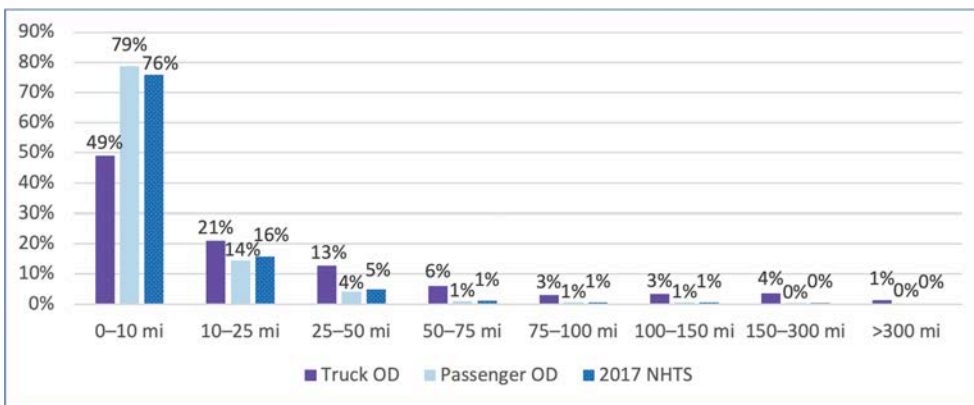
The [Visual Analytics tool](#) is a flexible user interface for selecting different combinations and aggregation levels of origin and destination geographies.

NHTS DATA SPOTLIGHT:

2020 NextGen NHTS OD Data Product Summaries

The recently released 2020 NextGen NHTS OD Data Products provide national-level details regarding annualized passenger and truck trips. Here are some data highlights from these new sources.

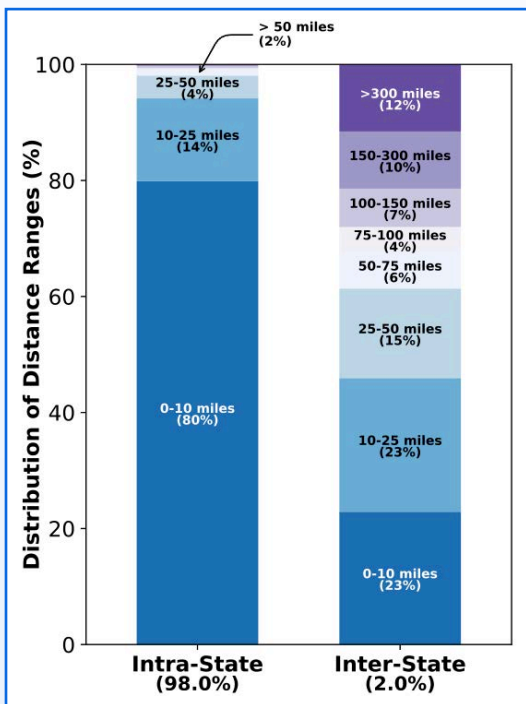
The 2020 national passenger OD data represent annual travel information for the U.S. population throughout the 2020 calendar year. Trip details cover 314.8 billion passenger trips, of which 79 percent are under 10 mi in length. This distribution compares well to the 2017 NHTS trip length distribution, with just a slight variance in the proportion of shorter trips¹.



Trips by Trip Distance Using Truck and Passenger OD Data.

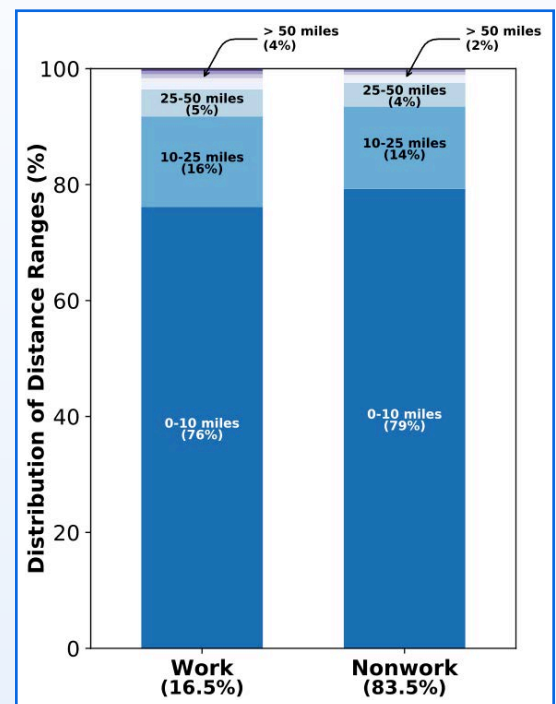
The 2020 national truck OD data reflect movements by freight trucks and light duty transportation trucks making both intercity and local deliveries. The data include 17.7 billion annualized truck trips, of which 49 percent are less than 10 mi in length.

¹NHTS was one of multiple data sources used to weight this dataset. For more details see, the [2020 Passenger OD Product Methods Report](#).



Passenger Trip Distribution by Inter/Intra-State and Distance.

In 2020, 98 percent of passenger trips in the United States were intra-State travel and, among these trips, 80 percent were under 10 mi in length. Non-work trips accounted for 84 percent of all trips made in that year and tended to be shorter than work trips (79 percent within 10 mi as compared to 76 percent of work trips).



Passenger Trip Distribution by Distance and Purpose.

NHTS POOLED FUND PARTNER SPOTLIGHT



Georgia DOT (GDOT) has been a long-time partner of the NHTS pooled fund program. The

agency purchased a 7,000-household add-on in 2009 and an 8,000-household add-on in 2017. Under NextGen NHTS, GDOT is purchasing a 2019 passenger OD data product add-on and has plans for purchasing an add-on sample to the 2024 core data survey effort. We asked Habte Kasse, GDOT's Branch Chief for Tech Services, Air Quality, and Planning Support, for details on how GDOT uses their NHTS add-on data, and here's what he said:

GDOT was in the middle of developing the Georgia Statewide Travel Demand Model (GSTDM) from scratch and needed a lot of data, including trip generation rates and modal splits, which are the major components for the model to generate vehicle trips and estimate traffic volumes and congestion. The vehicle trips were based on four types of trip purposes,

and NHTS data provided inputs to the statewide model for the percent share of each trip type. When used with the model, modal split data helped to estimate the split of transit trips and vehicle trips.

In addition to the GSTDM, GDOT also develops and maintains regional models for 14 of Georgia's 16 metropolitan planning organizations (MPOs) to assist in providing a technical tool for the purpose of the federally required Regional Transportation Plan (RTP). 2017 NHTS data were used to develop the urban and small urban area trip generation rates for those 14 MPOs; similarly, the trip rates were used to estimate vehicle trips by trip purposes and traffic volumes. The data were also used to develop the transit percent split within the MPOs.

In the future, NextGen NHTS data will continue providing input to trip generation in both urban and rural areas, and the new datasets in the NextGen NHTS program will provide additional data to help assess the following:

1. Trip origin and destination at both the TAZ level and for trip tour development.
2. The share of teleworking trips.
3. The share of car-sharing trips.
4. The share of public transit trips.
5. Car-ownership data.

Conducting such a large-scale data collection effort is very expensive to design, manage, clean up, and make readily available for use. Joining the NHTS pooled fund program has been a tremendous value for GDOT from cost and time savings to getting expert survey management perspectives. GDOT will likely continue to be part of this valuable program.

WANT TO JOIN THE POOLED FUND?

Participation in the NextGen NHTS pooled fund effort is on a rolling basis. Pooled fund partners can purchase additional core survey data and OD data in their regions or join at the technical advisory level to share in the NextGen NHTS underlying research. For more information about joining at any time, contact FHWA National Travel Behavior Data Program Manager Danny Jenkins at daniel.jenkins@dot.gov.



U.S. Department of Transportation
Federal Highway Administration

Stay Connected

To learn more about NextGen NHTS, join the pooled fund, or provide suggestions, please visit our website at <http://nhts.ornl.gov> or contact:

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