

USER'S GUIDE FOR THE PUBLIC USE DATA FILES

1995 NATIONWIDE PERSONAL TRANSPORTATION SURVEY

October 1997

Research Triangle Institute
Research Triangle Park, North Carolina

Federal Highway Administration
United States Department of Transportation

Publication No. FHWA-PL-98-002
HPM-40/10-97 (2M)

1995 NPTS USER'S GUIDE

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CHAPTER I - INTRODUCTION

1995 NPTS

This User's Guide provides details of the 1995 Nationwide Personal Transportation Survey (NPTS). It provides information to assist transportation planners and others who need comprehensive data on travel and transportation patterns in the United States. The 1995 NPTS updates information gathered in similar studies in 1969, 1977, 1983, and 1990.

DATA FILES

Publicly available data files containing data from the 1995 study have the following general features:

- it is a microdata data set, which contains the record of each interview (with information deleted that would identify the specific person or household),
- the data are arranged in six hierarchical files to facilitate analysis, and
- the data are available in the Statistical Analysis System (SAS), standard ASCII, and DBF format.

USER'S GUIDE

This guide includes descriptions of the survey procedures and methodology used for the 1995 NPTS, the questionnaire, the public use data files, and the weighting procedures for 1995 NPTS data. Appendices provide sample tables, SAS Proc Contents Listings, data file code books, glossary of NPTS terms, a copy of the 1995 NPTS questionnaire, discussion of estimating sampling errors, and additional background information.

1-A. SURVEY SPONSORS

Research Triangle Institute (RTI) conducted the 1995 NPTS under the sponsorship of four agencies of the U.S. Department of Transportation:

- Federal Highway Administration (FHWA)
- Bureau of Transportation Statistics (BTS)
- Federal Transit Administration (FTA)

National Highway Traffic Safety Administration (NHTSA)

FHWA has the lead role in coordinating the survey.

1-B. PURPOSE OF THE SURVEY

DATA COLLECTED

The NPTS serves as the nation's inventory of daily personal travel. It is the only authoritative source of national data on the daily trips including, but not limited to:

- purpose of the trip (work, shopping, etc.)
- means of transportation used (car, bus, subway, walk, etc.)
- how long the trip took , i.e., travel time
- time of day the trip took place
- day of week the trip took place, and, if a private vehicle trip:
- number of people in the vehicle , i.e., vehicle occupancy
- driver characteristics (age, sex, worker status, education level, etc.)
- vehicle attributes (make, model, model year, amount of miles driven in a year).

These data are collected for:

- all trips,
- all modes,
- all purposes,
- all trip lengths, and
- all areas of the country, urban and rural.

USES OF NPTS

NPTS data are used to:

- quantify travel behavior
- analyze changes in travel trends over time
- relate travel behavior to the demographics of the traveller
- look at the relationship of demographics and travel over time
- look at the relationship of travel and land use

The NPTS data are used primarily for gaining a better understanding of travel behavior. The data are used to enable DOT officials to assess program initiatives, review programs and policies, and plan for the future.

The NPTS is a tool in the urban transportation planning process; it provides data on personal travel behavior, trends in travel over time, trip generation rates, national data to use as a benchmark in reviewing local data, and data for various other planning and modeling applications.

The transportation research community, including academics, consultants and government, use the NPTS extensively to examine:

- Travel behavior at the individual and household level
- The characteristics of travel, such as trip chaining, use of the various modes, amount and purpose of travel by time of day & day of week, vehicle occupancy, and a host of other attributes
- The relationship between demographics and travel, e.g. the 1990 NPTS showed increases in personal mobility among women, older Americans, youth, and to some degree, low-income households
- The public's perceptions of the transportation system

People in various fields use the NPTS data to connect the role of transportation with other aspects of our lives. Medical researchers use the data to determine accident exposure rates of school-age children, particularly when they are travelling on their own by walking or biking. Social service agencies need to know more about how low-income households currently travel, which has taken on heightened importance with the employment initiatives for unemployed portion of the welfare population.

1- C. COVERAGE AND SCOPE

COVERAGE- WHO

The NPTS is a survey of the civilian, non-institutionalized population of the United States. As such, it does not include:

- military personnel living on base or overseas, OR
- residents of group quarters, such as nursing homes or assisted-living facilities, college dormitories, long-term medical institutions, and prisons.

Military personnel are included if they live in civilian housing.

College students are included if they live in apartments or other off-campus housing, or if they live at home for the summer.

WHEN

The 1995 NPTS was conducted over a period from May 1995 to July 1996. Travel data were collected for all seven days of the week, including all holidays.

WHERE

All trips by U. S. residents were recorded, including those where the destination was a foreign country.

**SCOPE-
WHAT THE
NPTS
INCLUDES -**

The 1995 NPTS data set includes:

- Household data on relationship of household members, education level, income categories, housing characteristics, and other demographic information.
- Motor vehicle information including year, make, model, and odometer readings, converted to annual estimates.
- Information on the availability of public transportation.
- Data about drivers, including information on travel as part of work.
- Data about one-way trips taken during a designated 24-hour period (the household's travel day) including the time the trip began, length of trip, composition of the travel party, mode of transportation, purpose of the trip, and specific vehicle used (if a household vehicle).
- Data describing round-trips taken during a 14-day period (the household's travel period) where the farthest point of the trip was at least 75 miles from home, including the destination, mode, and purpose.

- Information to describe characteristics of the geographic area in which the sample household and workplace of sample persons are located.
- Data on telecommuting.
- Data on people who use transit occasionally.
- Public perceptions of the transportation system.
- Reasons for not car-pooling or using public transit for the work trip.
- Incidence of seat belt use, and reasons people don't always wear seat belts.

WHAT IS NOT INCLUDED IN THE NPTS

In the past there have been many requests for data that are closely related to the NPTS, but are not available in the NPTS. Examples of the most common requests for data that are NOT included in NPTS are:

- Information on costs of travel (other than parking costs at work).
- Information about specific travel routes or types of roads used.
- How travel of the sampled household changes over time. Note: The NPTS is a cross-sectional survey, which means that different households are selected for the sample each time it is conducted. The NPTS is not currently a longitudinal survey, which would involve tracking the same sample households over time.
- Information that would identify the exact household or workplace location.
- Travel by household members under the age of 5 when they travel with non-household members, e.g., a day care provider takes your child to the park, another parent takes your child to their house.
- Information on the fuel economy of vehicles, i.e., miles per gallon or MPG. However, the NPTS vehicle file includes the vehicle make, model and model year, which would allow linking the NPTS with another source of MPG.
- The traveller's reason for selecting a specific mode of travel over another mode

1-D. COMPARABILITY WITH EARLIER NPTS DATA

1969 NPTS

The original Nationwide Personal Transportation Survey (NPTS) was conducted from 1969 to 1970 by the U.S. Bureau of the Census, who collected the survey data for the Federal Highway Administration (FHWA) of the U.S. Department of Transportation. That first NPTS survey was based on a multi-state probability sample of housing units located in 235 sample areas, which included 485 counties and independent cities representing every state of the U.S. and the District of Columbia. Experienced Census Bureau field staff conducted personal interviews in some 15,000 households, obtaining transportation-related information for all occupants.

Sections of that initial questionnaire provided information including:

- automobile record (ownership, whether an automobile was purchased new or used, and annual miles driven)
- proximity to public transportation and shopping
- travel to work
- driver information, such as estimated annual miles driven by licensed drivers
- travel to school
- all one-way trips by motor vehicle or some form of public transportation during the previous 24 hours (referred to as the travel day)
- record of all trips lasting one or more nights during the seven days that ended the day before the pre-assigned travel day.

1977 NPTS

During the 1977 NPTS, an update of the 1969 nationwide survey, the data were again collected from households in a national sample of area segments, with basically the same sampling, collection, and processing procedures as the 1969 version. The Census Bureau collected the data from approximately 18,000

households nationwide. The 1977 survey questionnaires were expanded considerably and updated to better address then-current issues, and the survey procedures were modified to upgrade the effort.

One of the major differences between the 1969 and the 1977 surveys was the extension of vehicle coverage to all motor vehicles owned by a sample household. While the 1969 survey included only automobiles as part of the vehicle record, the 1977 survey also included personal trucks and vans, camper vehicles, motorcycles, and mopeds.

1983 NPTS

When the 1983 NPTS was conducted between February 1983 and January 1984 the Census Bureau again collected survey data by using face-to-face interviews in an area probability sample of nearly 6,500 households. Additional information was obtained about the use of safety devices in household vehicles including seatbelt usage: when, how often, under what conditions; and information about child safety topics such as type of safety seat used and its position in the vehicle, internal harnesses in use, and injuries sustained from an emergency stop when a child was not using a child safety seat or other safety device.

1990 NPTS

Research Triangle Institute (RTI) conducted the 1990 NPTS using a computer-assisted telephone interviewing (CATI) technology. This was a significant change from the in-home interview methodology previously used for the NPTS. The national sample consisted of 18,000 households. One state and two Metropolitan Planning Organizations purchased additional interviews in their areas, increasing the total sample to more than 22,000 households.

Other methodology changes in 1990 were:

- the use of the random-digit dialing (RDD) sampling procedures,
- greater utilization of proxy respondents, and
- an increase in the allowable window for interviewing

sampled persons about their travel from four to six days.

The 1990 NPTS included new questions about vehicle accidents that members of the household had experienced and the highway types used for selected vehicle trips on the household's travel day. The core data components, however, were comparable to previous surveys in the series.

The 1990 NPTS features which were the same as in previous NPTS surveys included the:

- definitions of eligible persons, trip purposes, and modes of transportation,
- concepts of a travel-day section for all trips taken on the travel day and a travel period section for reporting long trips taken during a 14-day period, and
- core information collected for sample households, persons, vehicles, drivers, travel period, and travel day trips. For each travel day trip, information was collected regarding the trip purpose, mode, distance, time taken, and accompanying persons, as it was during earlier surveys.

1995 METHODS STUDIED

Prior to the 1995 NPTS pretest, the following methodology issues, which might improve the survey results or strengthen analysis capability, were studied:

- Methods to obtain more complete trip reporting
- Alternate definitions of a completed household interview
- Use of proxy respondents
- Obtaining data on trip chaining
- Enhanced geographic coding of household and work locations
- Expanded on-line editing during the interviews
- Vehicle odometer readings to obtain more accurate miles traveled (VMT) estimates.

1995 PRETEST

In preparation for the 1995 NPTS, a large methodological pretest was conducted from November 1994 through January 1995 to identify problems with new questions, determine the average interview time, and test the data collection procedures. A methodological experiment was embedded within the pretest sample in order to test three different survey methods: recall, memory jogger, and travel diary. The major pretest result was the indication that the use of travel diaries would lead to more complete NPTS trip reporting, and FHWA decided to utilize a one-day trip diary in the 1995 NPTS.

Other pretest results included the following:

- Practicality of mailing advance letters to selected households
- Feasibility of collecting more detailed information about the household location
- Feasibility of collecting paired odometer readings for the sample vehicles
- Advantage of using a household roster of trips to reduce respondent burden and increase trip recall

The household roster of trips allowed the CATI interviewer to skip trip detail for a specific respondent if information about that trip had already been reported by another household member.

Mailing advance letters informed the sample households of their selection for the 1995 NPTS, legitimized the survey and presented it in the larger context, and notified them that an interviewer would telephone their household to interview the members.

1995 NEW CONTENT

The 1995 NPTS included new questions to:

- Measure the public's perceptions of, or satisfaction with, the nation's transportation system
- Determine respondents usual modes of travel
- Elicit their reactions to statements about mobility and congestion
- Identify perceived difficulties in travel
- Collect information on the use of seat belts

- Describe the household's location, type of structure, and tenure
- Improve trip purpose coding

1-E. TYPICAL NPTS HOUSEHOLD

To illustrate key NPTS concepts, an example may be helpful. We introduce at this point a hypothetical sample household consisting of the following four persons:

Typical NPTS Household:

Terry and Keith live in a metropolitan area with their two children Lucy and Ben. When Keith picked up their mail in early October, 1995, he read the letter from Rodney Slater, the Administrator of the Federal Highway Administration, advising that their home telephone number had been selected in the sample for the Nationwide Personal Transportation Survey, and that they would be receiving a telephone call from an interviewer at Research Triangle Institute.

We will refer back to this typical NPTS household from time to time in later sections of this User's Guide, to illustrate aspects of the NPTS survey procedures or methodology.