

APPENDIX O

COMPARABILITY WITH EARLIER NPTS SURVEYS

Exhibit 1-1 in Section 1-D provides summary information on the NPTS surveys that were conducted between 1969 and 2001. This Appendix provides additional detail on each of these surveys.

1969 NPTS

The original NPTS was conducted from 1969 to 1970 by the U.S. Bureau of the Census, which 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), and

- 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 seat belt 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 RESEARCH

Prior to the 1995 NPTS pretest, the following methodology issues, which could improve the 1995 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, and
- vehicle odometer readings to obtain more accurate vehicle 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, and
- 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 another household member had already reported information about that trip.

Mailing advance letters informed the sample households of their selection for the 1995 NTPS, 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

Research Triangle Institute (RTI) conducted the 1995 NPTS. The survey 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, and
- improve trip purpose coding.

2001 NHTS

2000 PRETEST

From February through May 2000, FHWA and BTS funded a pretest of the 2001 NHTS. This pretest was conducted jointly by RTI and Westat. One of the key objectives of the pretest was to determine whether the Nationwide Personal Transportation Survey (NPTS) (focus on daily travel) should be combined with the American Travel Survey (ATS) (focus on long-distance travel). Both survey instruments were redesigned to better suit the objectives of the 2000 data collection effort. Other objectives included:

- improving the content of the questionnaires to avoid duplication between the two surveys and improve trip data,
- study the use of incentives at different stages during data collection,
- study the differences in trip data quality with and without the use of travel period diaries,
- study different data collection modes,
- study different questionnaire sequencing--administer the NPTS prior to the ATS and vice versa, and
- determine the study design that was the most cost-effective while maximizing response rates.

Eight different study designs were examined. These are presented in Exhibit O-1.

Exhibit O-1. 2000 NHTS Pretest Designs

Design Number	Design Name	Sample Type	Data Collection Mode	Type of Incentive
1	NPTS only	List-assisted RDD	CATI	No incentive
2	NPTS only	List-assisted RDD	CATI	\$2 cash per household with travel diaries
3	NPTS only	List-assisted RDD	CATI	\$5 cash per household with advance letter and \$10 per household with travel diaries
4	ATS only	List-assisted RDD	CATI	\$2 cash per household member with travel diaries
5	NPTS and ATS (retrospectively)	List-assisted RDD	CATI	\$2 cash per household member with travel diaries
6	NPTS and ATS	List-assisted RDD	CATI	\$2 cash per household member with travel diaries
7	ATS and NPTS	List-assisted RDD	CATI	\$2 cash per household member with travel diaries
8	NPTS and ATS (retrospectively)	Address-based sample	CATI and In-Person	\$5 cash per household with advance letter and \$2 per household member with travel diaries

2001 NHTS DESIGN

The findings of the 2000 pretest resulted in the 2001 NHTS being a combined survey. Pretest Design 5 (see Exhibit O-1) was the study design selected. Key modifications to the 1995 NPTS included:

- the assignment of a four-week travel period and the collection of trip data on all long-distance round trips of 50 miles or more from home,

- the collection of travel day and travel period data from all household members, not just household members 5 years and older,
- requesting a proxy for all household members less than 16 years. Household members age 14 and 15 could respond for themselves if approval was obtained from an adult household member. In 1995, proxy interviews were required of household members age 13 and below,
- modifying the definition of a travel day trip to exclude stops to change type of transportation,
- obtaining more detail on trip purposes,
- using a cash incentive in the pre-household interview mailing, and
- making additional modes available to collect odometer readings (Internet, facsimile and a toll-free number).