

NHTS Add-On Data Program: Applications and Survey Findings

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Presentation Outline

- Project Scope
- About the National Household Travel Survey (NHTS)
- NHTS Add-on Program
- Typical uses of Add-on Data
- Example Applications of Add-on Data
- Preliminary Results of Survey of Add-on Participants
- What's Next?

Project Scope

- **Goal:** Obtain information from previous/current participants of NHTS Add-on Program to aid TDOT/TN MPOs in use of 2009 add-on data purchased for TN.
- Project phases include:
 - Literature review (completed October 2010)
 - Preliminary survey of past add-on participants (completed January 2011)
 - Detailed survey of past add-on participants via direct call (March - April 2011)
 - Final report/presentation (April 2011)

About the NHTS

- Nationwide travel survey on passenger travel
 - => National sample
 - Covers travel for all trip purposes, for all trip-lengths, and by all modes
 - 1-day travel diary for "short trips" and 4-week period for long distance trips
 - Obtains detailed demographic information in addition to detailed trip information
- Conducted every 5 to 8 years since 1969
 - 1969, 1977, 1983, 1990, 1995, 2001, and 2009



NHTS Add-on Program

- NHTS data good for travel analysis at the **national level**
 - **Not adequate** to provide **statewide** or **local area-specific** estimates
- For states and local jurisdictions interested in developing travel estimates for their specific areas, **FHWA offers the opportunity to purchase additional samples specific to their area**
- Jurisdictions that purchase these additional samples are referred to as the "Add-on" areas, and the program is called, "Add-on Program"

NHTS Add-on Program

- Program began with the 1990 NPTS
- 20 participants in the 2009 NHTS Add-on Program (including Tennessee).



Deliverables

- Edited, weighted data
- O-D geocodes for all trip purposes and modes
- Odometer readings
- Transit, walk, bike trips
- Documentation and User's Guide
- Web-based retrieval system

Benefits

- No contracting or oversight hassles
- Economies of scale
- Contractors coordinated centrally
- SP-22 and PL forms can be used
- High data quality/ low risk
- Consistent local and national data
- Data can demand

Source: <http://nhts.ornl.gov/index.shtml> (FHWA, 2011)

NHTS Add-on Program

•2009 add-on participants could include up to 5 additional questions in the survey (not included in public use dataset).

•2009 dataset is most extensive published to date, with 150,000+ households including add-on data (125,000).

•Version 2 of the 2009 dataset was recently released - users guide expected soon.

Typical Uses of Add-on Data

- Travel behavior analysis
 - Identifying trends in travel demand
 - Determining mode use patterns/trends
 - Determining factors affecting household travel decisions
 - Relationships between demographics and travel
- Travel Demand Modeling
 - Statewide/regional travel demand model development
- Planning studies
 - Transit studies
 - Disaster planning

Example Application of Data – New York DOT

- NYSDOT– 1995, 2001, 2009 add-on participant
- Uses:
 - Developed detailed travel data for 12 MPOs
 - Trends between population density and travel patterns
 - Comparison of travel characteristics amongst MPOs
 - Comparison of NYC to rest of nation in vehicle ownership, mode of travel, travel characteristics
 - Air quality modeling
 - Travel patterns of special populations

Example Application of Data- Wisconsin DOT

- Wisconsin DOT- 1990, 2001, 2009 add-on participant
- Add-on data used to develop improved statewide and regional travel demand models (10 MPOs)
- Add-on data seen as critical to success and confidence in statewide and urban level planning models



Wisconsin Statewide Model



Wisconsin Regional Models

Example Application of Data- Des Moines MPO

- 2001 add-on participant
- Data used in Mode Choice Analysis, and Time of Day Analysis
 - Analysis indicated mode choice modeling not warranted on account of the very small percentage using transit
 - Determine the most heavily traveled time of day in terms of person trips - afternoon/evening commute
 - Lunchtime more heavily traveled than the morning commute hours

Plans for 2009 Add-on Datasets

- VDOT - update statewide/regional models; validation of Virginia University Student Travel Survey
- Pima Association of Governments - development of local travel models
- FDOT/Florida Model Task Force -
 - Integrated land use and transportation models
 - Analysis of travel behavior at individual and household level
 - Relationships between demographics and travel patterns
 - Rural travel characteristics
 - Public perceptions of transportation system

Preliminary Add-on Participant Survey

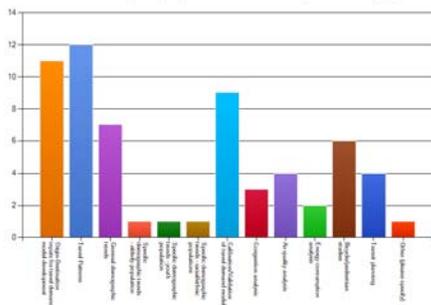
- A list of participating DOTs/MPOs and contact information was compiled, and representatives from each agency were contacted regarding the survey (22 agencies)
- Survey consisted of 10 questions (4 requesting information on agency type, contact details, and participation information; 6 specific to NHTS add-on experience)
- To date, 14 agencies have completed the survey (9 state DOTs, 5 MPOs) and 2 provided a reason for not doing so

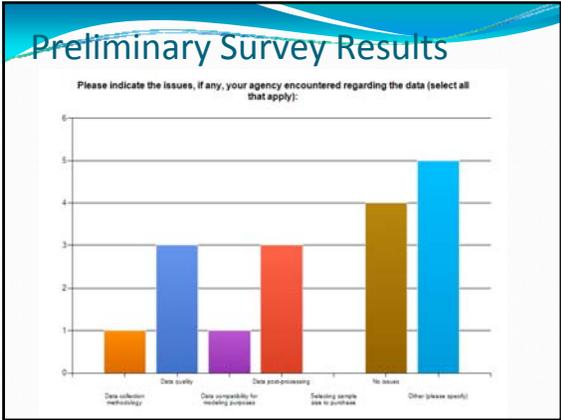
Preliminary Survey Results

- Responding agency NHTS Add-on participation:
 - 11 participated in 2009
 - 6 participated in 2001
 - 1 participated in 1995
 - 1 participated in 1990.
- 10 agencies are willing to participate in the detailed interviews.
- Sample size purchased ranges from 2,000 to 18,000.

Preliminary Survey Results

Please indicate how your agency has used the add-on data (select all that apply):





Preliminary Survey Results

- Other data issues reported:
 - *Weighting.*
 - *Sorting through all the extraneous data items collected. (A massive number of variables).*
 - *Data Quality with Version 1 of data. Version 2 is ok. Lack of Documentation, particularly on weighting methodology.*

Preliminary Survey Results

- 5 responding agencies added questions to the 2009 survey.
- Additional questions primarily focused on bicycle/pedestrian issues or transit.

Preliminary Survey Results

Please indicate your level of agreement with the following statements:

Answer Options	Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure (have not used it yet)	Rating Average	Response Count
The data we received was in a form that was easy to use.	2	10	1	0	1	3.08	14
The add-on data purchased by our agency was essential for meeting our transportation planning needs.	3	9	0	1	1	3.08	14
Our agency will participate in the add-on program again in the future.	2	6	1	0	5	3.11	14
<i>answered question</i>							14
<i>skipped question</i>							0

Preliminary Survey Results

• Lessons Learned:

- *The add-on data has increased the sample size and so allowed us to have a much more quality data which is more statewide representative. – Anonymous DOT*
- *Timeline for when reliable data will be available will likely slide significantly. - VDOT*
- *While we receive high quality and useful data from the NHTS add-on surveys, we might be able to do a more focused separate survey, not tied to the national NHTS, at a lower cost. – Wisconsin DOT*

Preliminary Survey Results

• Lessons Learned:

- *Our experience from the 2001 add-on was good. FHWA staff did provide a lot of administration leg work – contract negotiation, survey development, pre-test, and much more. This could also be a negative in that the DOT/MPO is receiving a turn key operation. – Baltimore MPO*
- *New modeling challenges require a hard look at the traditional data collection methods, including consideration of GPS-based surveys and other innovative data collection techniques. Overall NHTS provided good quality data that compares favorably with other similar surveys, is suitable for traditional modeling and analytical needs and even for some advanced travel demand modeling. – Anonymous DOT*

Preliminary Survey Results

- Lessons Learned:

- *The data was useful for the update of Travel Demand Model. We have not used it to the fullest potential, I am sure there could be lots of use of demographics analysis. - Corridor MPO*
- *Active dialogue between FHWA and you are essential. - NYSDOT*
- *A lot of analysts want the data but do not underestimate how much skill and effort is required to use the data effectively. - CADOT*

Preliminary Survey Results

- Lessons Learned:

- *We were going to use the data to get more information on rural counties for Air Quality Conformity needs. The samples were not significant enough to be statistically significant. We found the data difficult to use... especially with changes in staff. - KYTC*
- *We are analyzing the data and processing it for TDM's but have not used it in urban models yet. We were hoping to use non-highway mode surveys to help estimate a mode choice model for the Texas Statewide Analysis Model but there were not enough samples in these categories to develop estimates. We will consider purchasing fewer samples next time because of this. - TxDOT*

Federal Perspective

- Adella Santos, NHTS Program Manager interviewed on 1/14/11
 - Many agencies don't know what to do with the data, or don't have the resources to use it effectively.
 - FHWA feels there is a need to provide more guidance/tools so that agencies don't have to be burdened with developing this with their own resources.
 - FHWA would like all feedback so that it can be used to make changes/improvements for the next survey event.
 - New for 2009 participants- an online reporting tool was available so that participants could track progress of their sample throughout the process.
 - Most additional questions included by participants dealt with regional issues.

Federal Perspective

- Lessons Learned
 - For the next survey event, provide more general info to Add-on participants regarding questions they need to be asking so that they get the design/data they want, and are making informed decisions
 - More hands on learning from federal level and more tools/resources to support Add-on participants
- Questions
 - What more could FHWA do to keep participants informed of progress and improve communication?
 - In which area(s) do participants need more guidance?
 - Are there any other resources that participants need that FHWA could provide (i.e. webinars, etc.)?

What's Next?

- Follow-up calls – input needed regarding information TDOT/MPOs would like to obtain.
- Presentation in April to report results.
