



Winter 2010

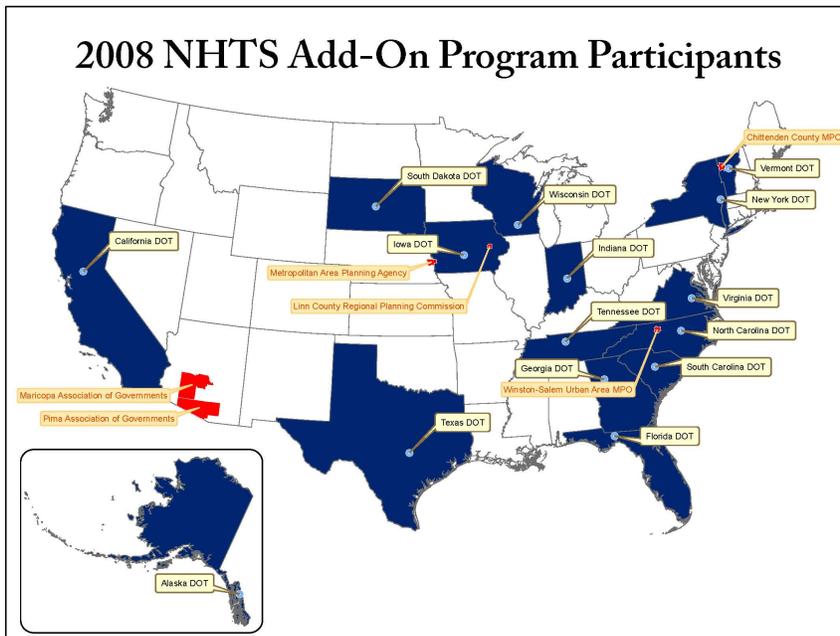
VTM Connection

Virginia's Transportation Modeling Newsletter

Update on Virginia National Household Travel Survey Data Availability

The FHWA release of 2008-2009 NHTS survey data for Virginia and other Add-On program participants was delayed from this past fall to early 2010 due to the post processing of the survey data taking longer than had originally been anticipated. VDOT has received the location file for the Virginia data collection effort and there are a total of 14,584 household samples and 117,760 trip ends statewide. Home end, work end, and trip end locations are all geocoded to Latitude/Longitude.

Nationally, over twenty states and MPOs participated in the Add-On Program including most states in the Southeast as shown in the figure below. Data collection for the Virginia NHTS Add-On began in April, 2008 and was completed in May, 2009.



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KEY TRAVEL MODELING WEBSITES

↪ **Virginia Travel Modeling Program**
<http://www.virginiadot.org/vtm>

↪ **Hampton Roads PDC Travel Modeling**
http://www.hrmpo.org/MPO_TravelDemand.asp

↪ **Metropolitan Washington COG Travel Modeling**
<http://www.mwcog.org/transportation/activities/models/>

↪ **FHWA Travel Model Improvement Program (TMIP)**
<http://tmip.fhwa.dot.gov/>

DALE STITH

Transportation Planner, Hampton Roads Transportation Planning Organization (HRTPO)



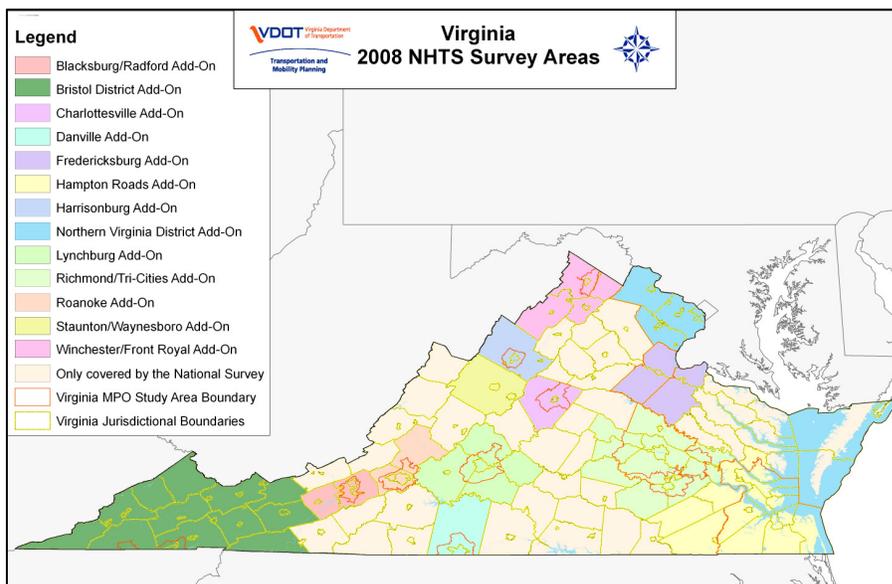
Dale is from Panama City, Florida and moved to the Hampton Roads region for college where she earned a BS in Geography (emphasis in Geographic Information Systems) from Old Dominion University. After college she worked at a restaurant in Virginia Beach for a few years before taking a GIS Analyst position with WorldView Solutions for a few years. With WorldView Solutions, Dale gained a wide range of GIS experience supporting a variety of clients including local, state, and federal governments, environmental organizations, and historical organizations. One major project she completed was an ArcIMS site for the Civil War Preservation Trust, depicting Civil War troop movements, troop locations, troop camps, and sites of historic significance.



see VTM SPOTLIGHT. page 3

The purpose of the NHTS Add-On in Virginia is to provide household travel survey data to support both metropolitan and rural transportation planning efforts statewide. By participating in the NHTS Add-On program, Virginia also will receive the benefits of being able to compare Virginia results against NHTS data from other states, the nation, and past NHTS efforts.

Nationally about 125,000 samples were collected as part of the Add-On program. Additionally, about 25,000 national samples were collected bringing the total number of NHTS samples collected to over 150,000. A map showing the NHTS survey areas in Virginia is shown below.



The table below shows the add-on sample target and the actual number of survey samples collected for each survey area of the state.

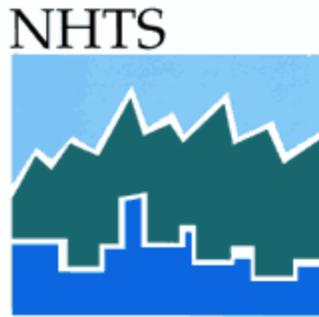
| Survey Area | 2008 State Population Estimate | Add-On Sample Target | Actual Survey Samples |
|--------------------------------------|--------------------------------|----------------------|-----------------------|
| Northern Virginia District | 2,180,340 | 400 | 408 |
| Hampton Roads | 1,658,458 | 3,085 | 3,113 |
| Richmond/Tri-Cities | 1,112,193 | 2,200 | 2,225 |
| Fredericksburg | 327,442 | 1,200 | 1,218 |
| Large Model Area Subtotal | 5,278,433 | 6,885 | 6,964 |
| Roanoke | 240,207 | 1,000 | 1,024 |
| Lynchburg | 241,345 | 1,000 | 1,013 |
| Charlottesville | 132,831 | 1,057 | 1,076 |
| Winchester/Front Royal | 153,430 | 1,000 | 1,013 |
| Blacksburg/Radford | 139,478 | 750 | 780 |
| Staunton/Waynesboro | 114,047 | 750 | 763 |
| Harrisonburg | 118,132 | 750 | 771 |
| Danville | 107,300 | 750 | 761 |
| Small Model Area Subtotal | 1,246,770 | 7,057 | 7,201 |
| Bristol District | 358,028 | 400 | 419 |
| Grand Total For Surveyed Area | 6,883,231 | 14,342 | 14,584 |

NEWS BRIEFS

- VDOT TMPD staff Jaesup Lee is going to present “Lane Flow Distributions on Basic Segments of Freeways under Different Traffic Condition” in 2010 TRB Annual Conference. This study proposed density measure to represent accurate lane flow distributions, while previous studies used traffic volumes, in 2-, 3-, and 4-lane basic segments of freeways under various traffic conditions. This paper developed regression models estimating lane flow ratios using density measure and validated it using new datasets.

Within the next few years, VDOT plans to use the new NHTS data to support a variety of transportation planning efforts including redeveloping travel demand models for Virginia metropolitan areas, superregional model areas, and the statewide model.

The survey data collected from this effort will provide planners across Virginia with a rich data source to support a variety of transportation planning applications. Data from this survey effort is in the process of being geocoded and post processed by FHWA's contractor Westat and will be delivered to VDOT this Fall. VDOT staff will review the NHTS data and refine geocoding as needed this Winter/Spring and plans to make the data set available for analysis and research by Summer, 2010.



For more information about NHTS, please visit:

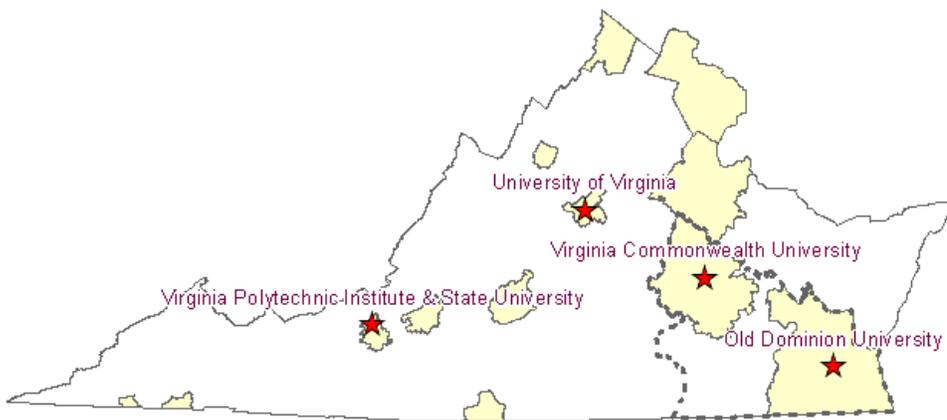
Official NHTS website: <http://nhts.ornl.gov/>

FHWA's NHTS website: <http://www.fhwa.dot.gov/policy/ohpi/nhts/index.htm>

NHTS FAQs website: <http://www.fhwa.dot.gov/policy/ohpi/nhts/nhtsspinfo.htm>

Update on University NHTS Supplemental Effort

To supplement the National Household Travel Survey (NHTS) Add-On effort, the Virginia Department of Transportation (VDOT) is partnering with four universities to conduct a supplemental NHTS survey effort for their university student populations to better understand university student travel behavior. The names and locations of these four universities are shown on the map below:



VDOT is doing this because the statewide NHTS effort is expected to significantly under represent university student travel for two reasons. First, the survey relied on landline telephone numbers to survey participants which many university students do not have. Second, NHTS traditionally has a low response rate for university aged students who are successfully contacted relative to the general population.

Dale had never seriously considered working in the field of transportation planning or travel demand modeling before 2006. But this all changed after her employer: WorldView Solutions decided to relocate from Hampton Roads to Richmond. Wishing to remain within Hampton Roads, she began looking for a new job in the area and “saw an employment ad from HRTPO for a Transportation Planner stating that they were looking for someone to help with running their four-step model. I googled ‘4-Step Model’ and was immediately fascinated by the concept so I applied for the job and the rest is history!”

In September, 2006, she joined the Hampton Roads Transportation Planning Organization, which serves as the region’s Metropolitan Planning Organization (MPO), and is housed within the region’s Planning District Commission: HRPDC. In her current position, Dale helps develop, maintain, and apply the Hampton Roads regional travel demand model and has used it for a number of projects including long range planning for both the MPO and rural area of HRPDC. Additionally, Dale created a new travel demand model for the City of Franklin in 2008. Dale says, “My GIS background served as a great foundation for working with the travel demand model.” Dale also helps provide GIS and public outreach support for the HRTPO Long Range Plan process.

In her spare time, Dale enjoys keeping up with her seven year old son Holden. She also enjoys traveling and has lived in Texas, California, and the Philippines in addition to Florida and Virginia. Her most recent exploration was to Peru, where she spent 17 days, and got to fly over the Nazca Lines, hike and camp out on the Inca Trail, and watch the sun rise on Machu Picchu. Dale also enjoys participating in team sports like softball and beach flag football. Dale lives in Virginia Beach with her son Holden.

NEWS BRIEFS *(continued)*

- NC RTPB staff is still busy reviewing the data collected from their 2007-2008 Washington Region household travel survey effort, but hope to release the data with supporting documentation within the next few months.

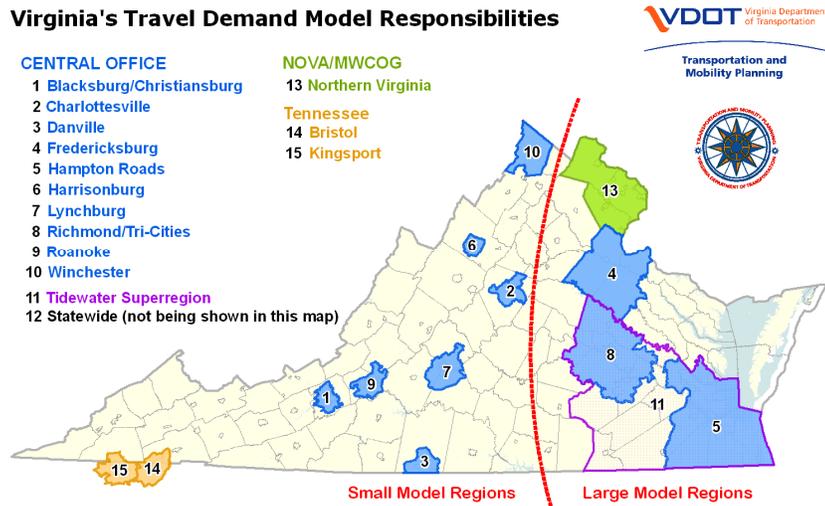
The data from this survey effort will be used to complement the statewide NHTS effort and enhance both statewide and metropolitan planning efforts including using the data to develop new university student trip purposes for travel demand models statewide.

The University NHTS effort relies on a web based approach tailored to the university student population to survey participants. The survey instrument questions were developed from the Virginia NHTS Add-On survey instrument with some adjustments made for the university application. Data collection was conducted this past Fall and is in the process of being geocoded and reviewed. Statewide Add-On NHTS data will be compared against University NHTS data for consistency after it becomes available in early 2010. It is anticipated that data from this survey effort will become available by Summer, 2010. Please look for future updates on this survey effort in the next edition of VTM Connection.

Latest on the 2010 TAZ Definition Process

The 2010 TAZ Definition process is still scheduled to take place in 2011 and the business rules governing the process, e.g., guidelines and standards, and the schedule will be released by Fall, 2010. This process will include TAZ definition for both small and large area geographies. The small area TAZs will be called CTPP Transportation Analysis Zones (TAZs) and will be similar to traditional TAZs, while the large area geography will be a new level with a minimum population threshold of 20,000 and be called CTPP Transportation Analysis Districts (TADs).

Highlights of Virginia Travel Demand Modeling Activities



| No. | District/MPO Area | Contact(s) | Current/Recent News |
|-----|---------------------|-------------------------------|--|
| 1 | BCM | Nelson Newton Jaesup Lee | A new Blacksburg-Christiansburg-Montgomery Co. area CUBE model is being developed for the 2035 CLRP |
| 2 | Danville | Jaesup Lee Nelson Newton | Updating socio/economic data changes for 2035 CLRP |
| 3 | Fredericksburg | Nelson Newton Paul Agnello | Commencing major model update |
| 4 | Hampton Roads | Jeremy Raw Jaesup Lee | Commencing major model update |
| 5 | Harrisonburg | Paul Agnello | Preparing for 2035 CLRP modeling analysis. |
| 6 | Northern Virginia | Bill Mann Bahram Jamei | The VDOT model to rank transportation improvements based on vehicle hours of delay reductions per cost by adding incrementally each improvement and building upon the previous iteration of VHD reductions has been accepted for presentation at ITE's Technical Conference in Savannah GA, March 14 - 17. |
| 7 | Richmond/Tri-Cities | Jeremy Raw | Supported MPO Staff in preparing model runs for air quality analysis of CLRP amendment Commencing major model update |