



Update on current activities of the Travel Forecasting Subcommittee

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Metropolitan Washington Council of Governments (COG)

National Capital Region Transportation Planning Board (TPB)



Overview:

Travel Forecasting Subcommittee (TFS)

- Formed in 1991 to provide oversight of activities related to development of the regional travel demand forecasting model
- Reports to the TPB Technical Committee
- Mission: “Provide guidance to, review of, and oversight to the COG/TPB information, analysis, and forecasting systems, and to serve as a forum for coordinating and enhancing such systems throughout the greater Washington region.” (adopted April 21, 1995).
 - In FY 2004, the Travel Monitoring Subcommittee was merged into the TFS, so the TFS now also includes oversight of travel monitoring activities.



TFS membership

- Composed of representatives from TPB member jurisdictions, state DOTs, and WMATA
- Also invited to participate: Consultants engaged in travel demand forecasting
 - Consultants do not vote on subcommittee matters, but they often provide valuable review of and comment about COG/TPB work activities.
 - In return, consultants keep posted on the latest developments with the region's travel forecasting process, thereby informing work they are doing in corridor and sub-regional studies for their clients.



TFS areas of oversight (2010 UPWP)

- Development of networks and models
 - Network development (Item 4a)
 - Models development (Item 4c)
- Travel monitoring
 - Cordon counts (Item 5a)
 - Congestion monitoring and analysis (Item 5b)
 - Travel surveys and analysis: Household travel survey (Item 5c1)



Other details

- Meeting schedule
 - The TFS meets regularly on the Friday following the third Wednesday of the month in January, March, May, July, September, and November
- Current chair
 - Wendy Jia, WMATA
 - Term: January to December 2009
 - Rotation: MD, DC, VA, WMATA
- Staff contact
 - Mark Moran, COG/TPB, mmoran@mwkog.org



Current activities

- Although the TFS has oversight for five program areas, current activities of the TFS have focused on these three areas
 - Network development (Item 4a)
 - Models development (Item 4c)
 - Travel surveys and analysis: Household travel survey (Item 5c1)



2007/08 Household Travel Survey

- 11,000 HHs (double the amount from 1994)
- Sample was over a 12-month period, but it took 14 months to administer
 - Bulk of data collection was in 2007. Thus, 2007 is the calibration year for Ver. 2.3 work
- Survey data is grouped into four files
 - Three of the four files are complete (household, vehicle, and person)
 - Trip file is still being worked on; should be completed before the Nov. TFS meeting



Network development

- Moving from 2,191 TAZ to 3,722 TAZ area system
 - New zones => new networks
- Development of a new GIS-based tool for managing/editing highway and transit networks used by the travel model
 - Joint effort between TPB staff and consultant (DCI)
- Conflation of master highway network (and later transit links) to the NAVTEQ street centerline database
- Developing networks for the 2009 CLRP & FY 2010-2015 TIP



Models development (1 of 3)

- Collection, cleaning and analysis of new surveys
 - 2007/08 Household Travel Survey (HTS)
 - 2007 Metrorail Survey
 - 2008 Regional Bus Survey
- Methods for speeding up travel model runs
 - Distributed processing (Cube Cluster)
 - New traffic assignment algorithms



Models development (2 of 3)

- Keeping abreast of developments
 - CS contract to perform scan of best modeling practice
 - 5 reports have been issued and are being reviewed by TFS
 - Fuel Prices in Travel Models (Task 2)
 - Recommended Approach to Near-Term Model Enhancements (Task 3)
 - Framework for Before-and-After Study of HOV Network Effects Due to New HOT Lanes (Task 4)
 - Improving the Model's Sensitivity to Land Use Policies and Nonmotorized Travel (Task 5)
 - Recommendations on Feedback Convergence Methods (Task 6)



Models development (3 of 3)

- Plans for re-calibration of the Ver. 2.3 travel model on the new zone system (3,722 TAZ)
 - Enhancements compared to Ver. 2.2
 - Nested Logit Mode Choice Model
 - Updated Truck (Medium/Heavy) Models
 - Transit assignment capability
 - Envisioned features to be considered
 - Include non-motorized travel for all purposes
 - Revisiting definition of area type (per new TAZ system & LU data)
 - Similar to existing density-based definition but more detailed
 - Subdivide NHB purpose into work-related & non-work-related
 - Pedestrian Environment Factor (PEF) for MC and pathbuilding
 - Expand peak (AM/PM) period definitions (must review HTS & observed congestion data, such as Skycomp)



Schedule of activities

Task Name	2009				2010			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Air quality conformity determ. (2010 CLRP & FY 2011 - 2016 TIP w/ 2040 out year)					■	■	■	■
Develop new 3,722-TAZ system	■	■	■					
Test ways to reduce model run times	■	■						
Preparing surveys	■	■	■					
Network development on new zone system (3,722 TAZ)	■	■	■	■	■			
Develop land activity forecasts	■	■	■	■	■			
Model calibration				■	■	■		
Model testing and refinement				■	■	■	■	
Model evaluation with Round 8.0 Coop. Forecasts						■	■	
Release of the Ver. 2.3 travel model and documentation								◆ 8/13