National Capital Region
Transportation Planning Board

Approved
as of 01/24/25

TPB TRAVEL FORECASTING SUBCOMMITTEE

HIGHLIGHTS OF THE NOVEMBER 22, 2024 MEETING, 9:30 AM TO 11:15 AM

Meeting was held virtually via web conferencing software. There was no on-site meeting.

MEETING ATTENDEES

MEMBERS, ALTERNATES, AND PARTICIPANTS

- James Bunch (Mead Hunt)
- Kevin Chai (Fairfax County)
- Xiao Cui (VDOT)
- Joel Freedman (RSG, Inc.)
- Li Li (Whitman, Requardt & Assoc.)
- Yuanjun Li (M-NCPPC, Montgomery Co.)
- Feng Liu (Cambridge Systematics, Inc.)
- Rakesh Mora (RK&K)
- Krishna Patnam (AECOM)
- Harun Rashid (NVTA)
- Steve Weller (Kimley-Horn & Assoc.)
- Leanne Young (WMATA)

COG STAFF

- William (Bill) Bacon
- Robert d'Abadie
- Nazneen Ferdous
- Yu Gao
- Ken Joh
- Martha Kile
- Mark Moran
- Ray Ngo
- Wanda Owens
- Jinchul (JC) Park
- Jane Posey
- Meseret Seifu
- Bahar Shahverdi
- Jessica Storck
- Dusan Vuksan
- Feng Xie
- Zhuo Yang
- Jim Yin

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1. OPENING: MEETING ROLES, RULES, AND ROLL CALL OF PARTICIPANTS

Mark Moran discussed roles of the meeting participants (e.g., chair, host, technical host, and note taking), meeting rules, and then performed a roll call of participants. This meeting of the Travel Forecasting Subcommittee (TFS) was chaired by Harun Rashid.

2. APPROVAL OF MEETING HIGHLIGHTS FROM THE PREVIOUS MEETING

The highlights of the September 20, 2024 meeting of the TFS were approved without any changes.

3. COG/TPB GEN3 TRAVEL MODEL: STATUS REPORT

This item was presented by Feng Xie, who spoke from a set of presentation slides. He provided the regular status report on COG/TPB's Gen3 Travel Model. He went over recent enhancements and bug fixes to the Gen3 Model. His presentation was mainly focused on the preliminary 2025 modeling results from the Gen3 Model usability testing. Feng presented the aggregate-level model results

including demographic statistics, travel demand statistics, and highway/transit assignment results. He concluded his presentation with next steps.

In the Webex chat, Jim Bunch asked how the active transportation networks were created for walk and bike. Joel Freedman replied that there is no separate active transport network in the Gen3 Model, as the model is a "one-zone system" implementation of ActivitySim.

Harun asked why there is an increase in average trip length but a decrease in VMT on Slide 10. Feng explained that VMT per household is dependent on both the household trip rate and the average trip length. While the average trip length has slightly increased, the household trip rate has dropped significantly, thereby leading to a decrease in VMT per household.

Harun asked about the timeline for the Gen3 Model release. Feng responded that even though there are still some loose ends that need to be tightened up, COG staff are generally satisfied with the Gen3 Model performance and will proceed with Gen3 Model Phase 3 development and usability testing. COG staff plan to release a beta version of the Gen3 Model to selected stakeholders for testing and feedback in 2025. COG staff will deem the Gen3 Model to be production ready once it has passed all the tests in the usability testing phase. The actual date will depend on how smooth the usability testing goes. Current estimates are that the Gen3 Model could be deemed production ready in late 2025 or early 2026.

4. COMPARISON OF BIG DATA AND OBSERVED TRAFFIC COUNTS: TRUCKS AND ACTIVE TRANSPORTATION

This item was presented by Yu Gao, who spoke from a set of presentation slides. His presentation was focused on the evaluation of Big Data Average Annual Daily Traffic (AADT) data, specifically comparing Truck AADT and Active Transportation counts from both StreetLight Data and Replica with traffic counts collected in 2023 for DC.

Yu provided a recap of the previous big data AADT evaluations and provided updates on several follow-up research topics. He shared his findings regarding a comparison of StreetLight 2022 vs 2023 AADT, using the Network Performance Module. He noted that, although slightly higher (by 3 percent) the values from the Big Data were close to the observed data obtained from the DC continuous counting stations.

Following up on a request made at the July TFS meeting regarding StreetLight's AADT penetration rates, Yu demonstrated how to find the sample size in StreetLight's AADT analysis module to estimate penetration rates.

Yu provided background information on the Truck AADT products from StreetLight and Replica. He noted that StreetLight categorizes AADT by three weight classes, but Replica provides AADT for Single-Unit and Combination-Unit Trucks, aligning with both the collected data format and FHWA HPMS requirements. In comparing Replica's Truck AADT with the traffic count data, Yu highlighted that Replica's data is generally reasonable for groups of roads, but less accurate for individual road segments.

Yu also presented his evaluation of Big Data Active Transportation products. Both StreetLight and Replica offer Active Transportation planning tools as well as link-level counts. StreetLight provides limited bike/pedestrian count data through 2022 and Replica offers comprehensive link-level data through Fall 2023. He noted that, like Truck AADT, Replica's data is generally reasonable for groups of locations, though it is less accurate for individual links.

Yu concluded by sharing an example of how he applied Big Data AADT products in estimating traffic volumes for a recent project. He emphasized that while these big data products are valuable tools

for group-level estimates and filling gaps, such as where no actual counts exist, the Big Data estimates cannot replace actual data collection, as they may not always be accurate at the individual segment level and require validation.

Harun asked about the questionable traffic patterns in StreetLight's Day of Week and Month of Year trend. Yu responded that he had shared his findings with StreetLight technical staff and will keep Harun posted.

Jim Bunch asked for clarification, via the Webex chat box, whether the comparison was conducted using the Collected AADT from MWCOG with the Places seasonal modeled data from Replica and NOT Replica's AADT data sets which are a separate product. Jim added that the places data is an ABM, but the AADT data is not. Dusan Vuksan responded that Replica data represent an ABM output, so they differ in that way from some of the other sources. Joel added that all passive data products have some aspect of modeling.

5. THANKS TO OUTGOING CHAIR OF THE TFS AND ANNOUNCEMENT OF NEW CHAIR FOR 2025

Mark stated that the chair of the COG/TPB Travel Forecasting Subcommittee rotates on a calendar-year basis between four entities: The District of Columbia, Maryland (state or local agency), Virginia (state or local agency) and a transit or regional agency (e.g., WMATA, VRE, MARC, and/or a regional or sub-regional agency). Based on the recent rotation order, the upcoming chair should be a representative from a transit agency or a regional agency. This year was Virginia's turn to chair the TFS. Harun, from the Northern Virginia Transportation Authority (NVTA), served as chair from January to December. Mark thanked the outgoing chair for his service and presented a signed certificate of appreciation to Harun, from Christina Henderson, 2024 TPB Chair.

Next, Mark introduced the new chair: Leanne Young, an Operations Research Analyst, working in the Office of Planning and Performance from at the Washington Metropolitan Area Transit Authority (WMATA). Leanne specializes in developing service and ridership models to support planners and in cultivating novel tools for data analytics. Leanne holds a master's degree in data science from Johns Hopkins University. Before joining WMATA, she worked as a systems performance analyst at the Johns Hopkins University Applied Physics Lab, where she evaluated operational capabilities of missile defense systems through field tests, modeling, and simulation studies. She is passionate about engaging in discussions on regional travel modeling as the chair of the TFS this coming year.

Mark and the subcommittee then welcomed Leanne as the 2025 chair and Leanne made some brief remarks.

6. ROUNDTABLE DISCUSSION OF CURRENT MODELING EFFORTS AROUND THE REGION

Harun asked if any agencies had any planning studies or modeling updates to provide to the subcommittee, but no updates were offered.

7. OTHER BUSINESS

Mark noted that the next planned TFS meeting is scheduled for Friday, January 24, 2025, from 9:30 AM to 12:00 noon.

Mark mentioned that the TRB Annual Meeting will be held January 5-9, 2025, in Washington, D.C.

He also indicated that the 2025 counting and certification of election votes from the presidential election will occur at the U.S. Capitol on Monday, January 6, 2025, and this date has been designated as a national special security event by the U.S. Secret Service. Although Mark did not

think that this security event would affect people experience at TRB, but he wanted to make sure that people knew about the security event happening during TRB.

Regarding planned presentations at upcoming TFS meetings, Mark noted the following:

- Jan. 24: COG/TPB Gen3 Travel Model: Status report (Feng Xie)
- Mar. 21: COG/TPB Gen3 Travel Model: Status report (Feng Xie)
- May 16
    - COG/TPB Gen3 Travel Model: Status report (Feng Xie)
    - An update on the status of Travel Demand Modeling in Prince George's County (Manfredo Davila, M-NCPPC, and Krishna Patnam, AECOM)

Mark encouraged anyone who is interested in making a presentation or has a recommendation for a future TFS presentation to contact him.

Mark noted per request at the September TFS meeting, Mark had shared his AMPO presentation as part of the November 2024 TFS mailout.[1]

Mark announced two upcoming retirements. First, Jane Posey will be retiring from COG in January, after more than 36 years of service to COG and the region. Jane has been a key staff member in the Travel Forecasting & Emissions Analysis (TFEA) Team, working on Air Quality Conformity (AQC) analyses, network development, and keeping on top of air quality regulations and laws. Jane works for Dusan Vuksan in the Model Applications Group, and she is an institution at COG. Mark indicated that, following her retirement, he and Dusan have asked Jane to continue to work for COG on a temporary contractual basis, for a period of time, to help finish up the AQC analysis, which is currently underway.

Second, Mark noted that Yuanjun Li, who works at the Montgomery County Planning Department, which is part of the Maryland-National Capital Park and Planning Commission (M-NCPPC), would be retiring around the end of the year. So, this TFS meeting would likely be her last one. She has been attending TFS meetings since 1997 when she worked for the Baltimore Metropolitan Council (BMC). Mark expressed his appreciation to both Jane and Yuanjun, and he thanked them for all their service to the region.

8. Adjourn

The meeting was adjourned at about 11:05 AM.

Attribution: This meeting summary was developed using a variety of sources, including notes from participants, a recording of the meeting, presentation slides, and a meeting summary generated by artificial intelligence (AI), via Webex and ChatGPT. Any sections of the meeting summary based on AI-generated content were reviewed and edited for accuracy by humans. The primary authors of the meeting summary were the meeting presenters, Meseret Seifu, and Mark Moran.

[1] Mark S. Moran et al., "ActivitySim: Open-Source Modeling Updates and Implementations (Breakout Session 8-C: Activity-Based Travel Demand Modeling)," https://ampo.org/news-events/ampo-annual-conference/2024-ampo-annual-conference/.