



NEW YORK STATE ASSOCIATION OF MPOs MODELING WORKING GROUP

September 11, 2018

In-person Meeting

10:00 AM – 3:00 PM

MEETING NOTES

Participating

- Chris O'Neill, CDTC (Chair)
- Chris Bauer, CDTC
- Lauren Burns, OCTC
- Mark Debal, DCTC
- Emily Dozier, DCTC
- Mark Grainer, NYSDOT
- Nathan Harp, NYSDOT
- Jin-Wook Lee, Avail
- Erik Krans, AVAIL
- Catherine Lawson, AVAIL
- Alex Muro, AVAIL
- Nikhil Puri, CS
- Brian Slack, UCTC
- John Sterbentz, BMTS
- Chris Tortora, GTC
- Alan Warde, NYSDOT

By phone

- Joe Bovenzi, GTC
- Jim Davis, NYSDOT
- Rich Denbow, CS
- Matt Grabau, GBNRTC
- Munnesh Patel, NYMTC
- Michalis Xyntarakis, CS
- Yun Hai Zhang, NYMTC

1. Introductions

Chris O'Neill and Catherine Lawson (AVAIL) opened the meeting and welcomed participants.

2. Using the NPMRDS Web Tool for Congestion Planning-Practical Examples from the Mid-Hudson MPOs

Dylan Tuttle and Emily Dozier (DCTC), Lauren Burns (OCTC), and Brian Slack (UCTC) discussed the Congestion Management Process (CMP) underway in the Mid-Hudson region and the use of the NPMRDS tool for analysis. The three MPOs jointly develop a CMP for the

entire region. They are using the NPMRDS tool to apply the federal PM3 reliability measures to calculate travel time reliability indices and perform hotspot analyses broken out by functional class, geography, and duration. Using the PM3 measures allows them to gain additional insight beyond using non-federal measures they have historically used. They found the Macro tool to be the most useful for their CMP. In applying the tool, they discovered data issues where segments in the NPMRDS cross MPO boundaries and where speed limit data is imperfect, and have made adjustments.

Their next steps are to continue analysis to improve data accuracy and develop consistency. They are aiming to have a solid understanding of underlying data and potential issues before presenting their work to their MPO committees. Once they have a better understanding they will finalize analysis, complete the CMP document, and develop technical memos.

The AVAIL team is working with INRIX to resolve issues of missing data on NHS links. They are considering approaches to address known data issues. They can potentially limit analysis to NHS segments, exclude performance measures that rely on speed limits, create new measures based on free flow speeds, or exclude very short segments from analysis.

The tool provides this analysis capability for all MPOs that want to apply it. Users will be able to analyze data on a periodic basis going forward, allowing year-over-year comparisons and ability to track the results of transportation investments.

3. Data and Modeling Presentations – Nikhil Puri and Michalis Xyntarakis, Cambridge Systematics

Nikhil Puri presented work performed by Cambridge Systematics (CS) on the evaluation and application of Location Based Service (LBS) data in transportation planning and modeling. Michalis Xyntarakis, also from CS, participated by phone. Nikhil discussed processing and interpreting data, validation against known data sources, use of LBS to supplement traditional survey methods, privacy concerns, and applications. The group discussed how LBS data has been expanded using robust demographic sources on the origin and destination ends to develop trip tables, which could be routed using a variety of engines. The data are anonymized and have been used to impute trip purposes and temporal patterns, shedding light on the behavioral aspect of travelers.

Nikhil and Michalis also discussed network conflation - how General Transit Feed Specification (GTFS) feeds have been conflated with the NYMTC Travel Demand Model highway network to produce a more robust and integrated network. This allows for better estimation of multimodal travel times that feed into most key elements of the model. They also discussed conflation of NPMRDS data with a model network in North Carolina. CS developed algorithms to convert the NPMRDS network into a routable network.

4. Summary of the 2018 National Household Travel Survey Workshop

Catherine Lawson from AVAIL attended the August 8-9, 2018 workshop on the 2017 National Household Travel Survey (NHTS) in Washington DC and reported the following

items to the WG. The workshop website (<http://www.trb.org/Calendar/Blurbs/176274.aspx>) contains more information.

- The 2017 sampling frame was different from earlier surveys and therefore she cautioned that care should be taken when making comparisons. A good portion of the sample was self-reported compared to older surveys, and incentives were offered this time.
- One finding that stands out is a reported increase in transit ridership. At the same time, transit agencies are reporting decreased ridership. More research is needed to understand this.
- Less peak spreading was reported compared to earlier surveys.
- Data was analyzed using R-Studio, an open source tool. It contains information on alternative fuel vehicles, non-motorized modes, and use of Transportation Network Companies (TNC).
- There is an effort to blend different sources of data on a more regular basis, which will likely be a part of the next generation NHTS.

5. VMT Growth Update

Chris O'Neill presented on VMT growth trends and implications for modeling and planning. This issue is a focus area for the Modeling WG and has been discussed in previous meetings. He presented slides showing annual VMT in the U.S. beginning to decrease in 2007. Population-adjusted VMT also began to decrease around the same time before it began to rise again in 2014, but is still around the 1998 level. These trends are important to keep in mind when forecasting travel demand because there is a lot of uncertainty in forecasts and variability arising from workforce issues, including recessions and systemic changes such as technology replacing workers and people working from home.

One way to incorporate uncertainty is scenario planning. The NHTS should give us another important snapshot for model calibration. NYSDOT conducted a dialogue with the Modeling WG last year on the NHTS.

6. Other Business

- The Working Group is interested in tool training at the next NYSAMPO conference.
- NYSDOT is in the process of purchasing INRIX expansion data.
- Tool shape file exports will include LRS information.
- Crash data is included in the tool, however, the data needs further review to make it consistent with the federal performance measures requirements.

7. Next Meeting

The next meeting is scheduled for September 28, 2018.