Item #6

UPDATE ON CONGESTION MANAGEMENT PROCESS (CMP) ACTIVITIES

MOITS TECHNICAL SUBCOMMITTEE
MARCH 10, 2015

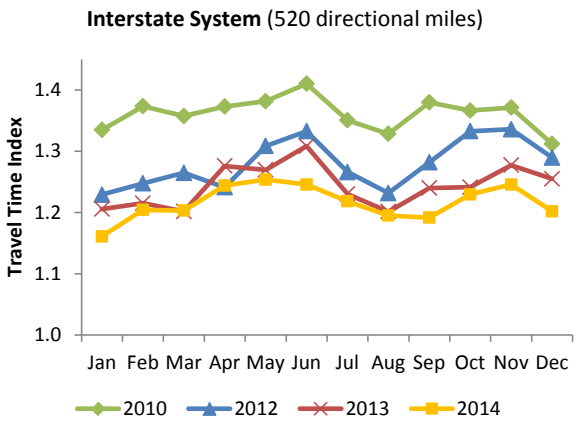
Wenjing Pu, COG/TPB Staff

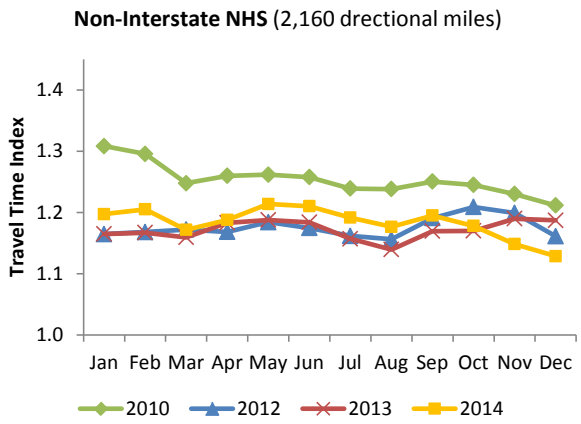
Outline

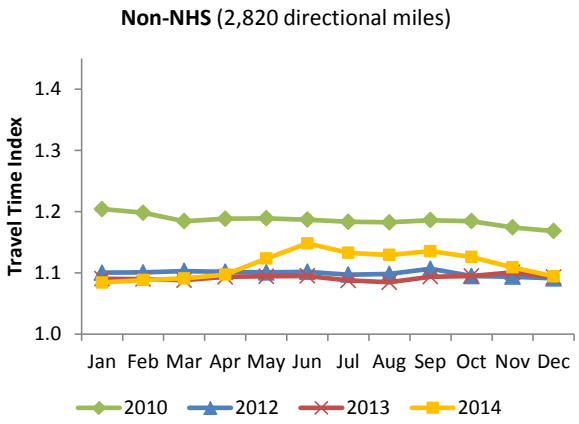
- National Capital Region Congestion Report
  - 4th Quarter 2014
  - Available: www.mwcog.org/congestion
- 2nd Vehicle Probe Data Users Group meeting
  - Agenda and presentations available: www.tinyurl.com/vpdug (click "Documents" tab)

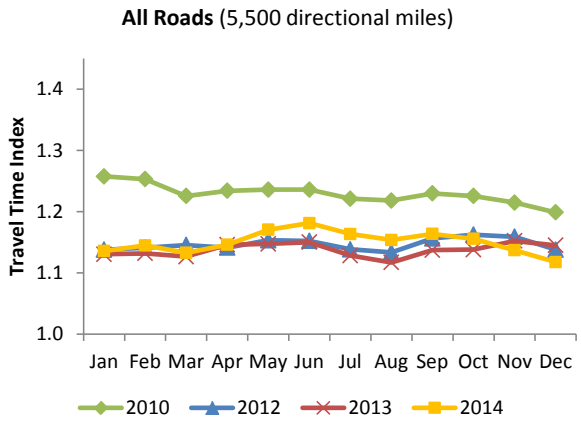
Congestion Report - Congestion

- Less congested Interstates (Q4 & 2014)
- More congested arterials (2014)
- Overall, traffic was more congested in 2014 than 2013



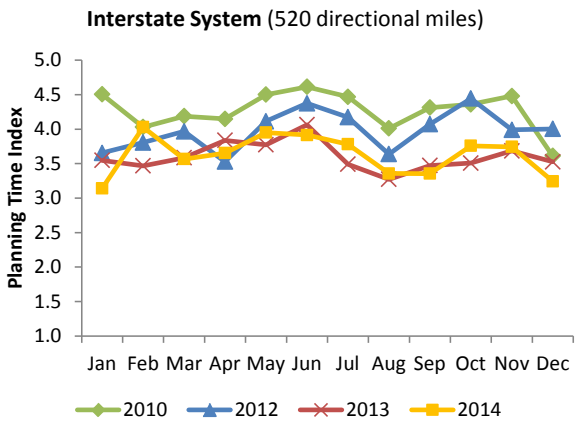


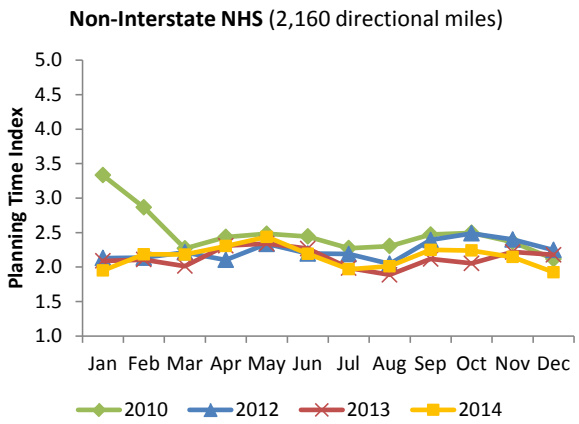


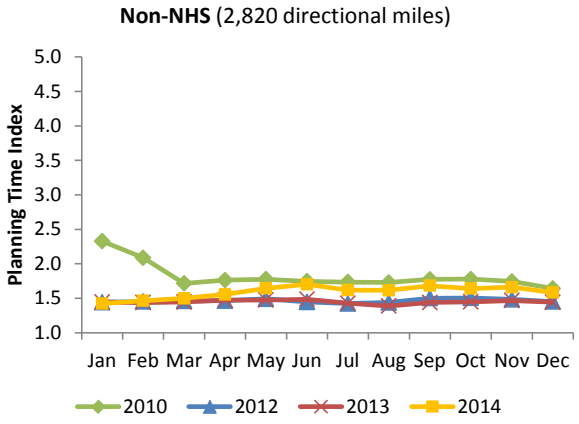


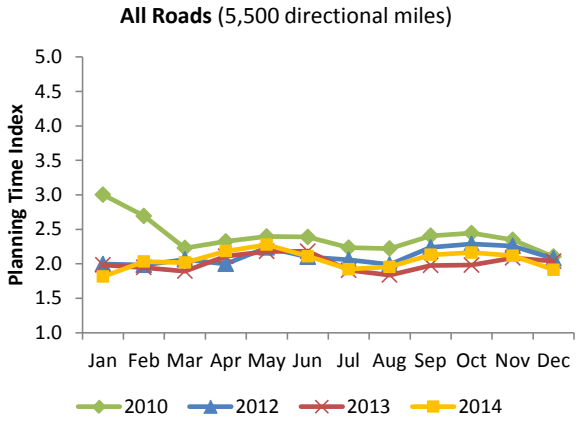
Congestion Report - Reliability

- Slightly less reliable Interstates (Q4 & 2014)
- Less reliable arterials (2014)
- Overall, traffic was less reliable in 2014 than 2013



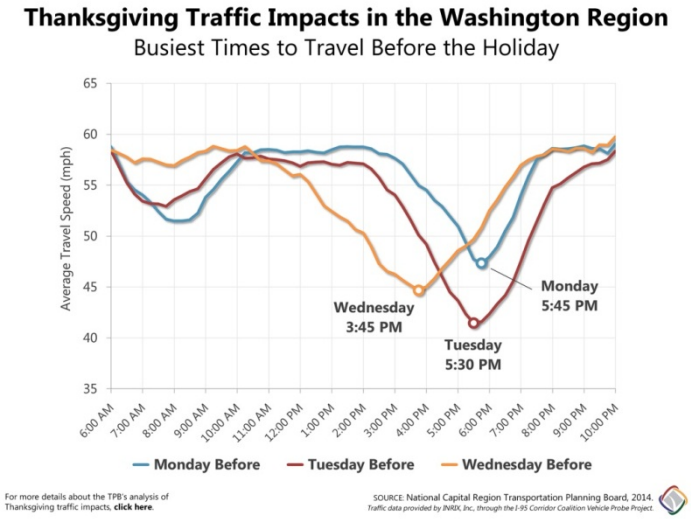






2014Q4 Spotlight: Thanksgiving Travel

- TPB Weekly Report released on Nov. 18, 2014
  - Tuesday worse than Wednesday
  - Animated traffic maps
- Well received by the media and public
- Coordinated efforts within COG



Vehicle Probe Data Users Group

- Mission: to enhance regional *coordination, consistency, and capabilities* in the use of vehicle probe-based traffic data toward *performance-based transportation planning and programming*
- Two meetings to date
  - October 9, 2014
  - February 12, 2015
    - Speakers: Stanley Young (UMD), Subrat Mahapatra (SHA), and Mena Lockwood (VDOT)
    - 28 participants (including 8 COG/DTP staff)

Stan Young's Recommendations on Arterial Data*

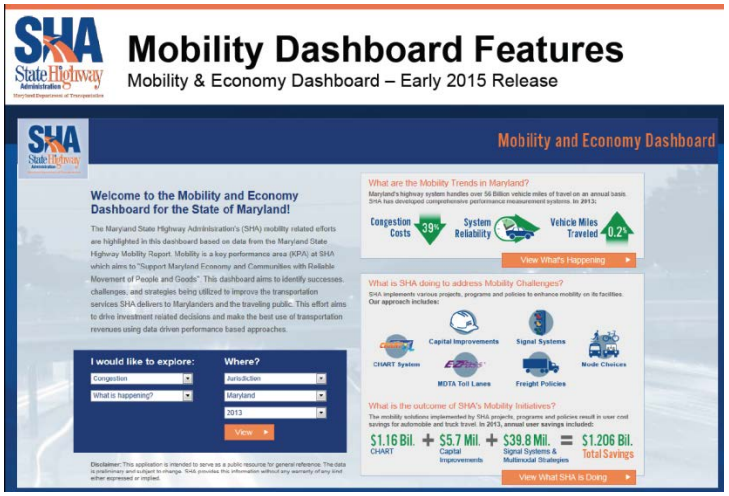
Likely to have usable probe data	Possibly usable probe data	Unlikely probe data is usable
• AADT >40000 • 2+ lanes • <= 1 signals per mile • Principal Arterials (HPMS) • Limited Curb cuts	• AADT 20K to 40K • 2+ lanes • <= 2 signals per mile • Minor Arterials (HPMS) • Should be tested	• Low volume, < 20K AADT • >=2 signals per mile • Major Collectors (HPMS) • Not recommended

- Probe data is anticipated to improve in time
  - Increased probe density and better processing
- As Probe data degrades, delay is underestimated
  - As probe technology matures, measured delay may increase
  - Challenged by queuing or cycle failure
  - Not sensitive to / confused by bi-modal traffic patterns

*Source: Stanley Young, University of Maryland

SHA's Use of Probe Data*

- Annual Mobility Report
  - 2014 Draft Report
- Project Planning and Design Studies
- Mobility Dashboard (Online)
  - What is happening
  - What is SHA doing
  - What is the OUTCOME
- Before and After Studies
- Advanced Analysis Tools
  - SHA will develop multi-resolution and time-dependent travel demand models for integrated planning and operations



*Source: Subrat Mahapatra, SHA and Matthew Wolniak, JMT

VDOT's Use & Evaluation of Probe Data*

VDOT's Process:

- Quality Evaluation: (UVA and VCTIR)
  - INRIX, HERE, and TomTom real-time data is being compared side-by-side on 10 routes in Virginia (5 freeway/5 arterial).
  - Evaluation methodology is based on University Maryland VPP evaluation, including recent modifications for examining distributions of travel time on arterial roads
  - Portable Bluetooth readers, permanent readers, and WiFi address matching are being used to generate the "ground truth". Data will be collected at each site for between 1 and 2 weeks.
  - Both TMC level and sub-TMC data is being evaluated. One route that is not on the TMC network (SR 419) is being evaluated.

*Source: Mena Lockwood, VDOT

Next Steps

- Next meeting in May
  - VDOT's evaluation of probe data (Michael Fontaine, VCTIR)
  - Preliminary outline in processing probe data and calculating performance measures (Wenjing Pu, COG)
  - SHRP2 research: Value of Travel Time Reliability in Transportation Decision Making: Proof of Concept—Maryland (Kaveh Sadabadi, UMD)
- Draft recommendations for probe data processing
- MAP-21 Congestion and System Performance rulemaking