

# TPB CONGESTION AND TRAVEL ANALYSIS TOOLS

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# Overview

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- The metropolitan Washington region is the 9<sup>th</sup> largest metropolitan area in the U.S with more than 6 million persons.
- Growth has been fueled by long-term job growth in the region, attracting new residents needed to meet demand for more workers.
- Despite short-term variations in the business cycle and other disruptions, COG's Round 10.1 Cooperative Forecasts of Population, Households, and Employment call for continued long-term growth.
- Growth will place increased demand on the region's transportation infrastructure and services.
- TPB planners have used and continue to develop a variety of tools and methods to understand the effects of growth and the performance of the transportation system on regional travel and congestion.



# Primary Data Collection (Surveys)

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TPB has a long-standing legacy of conducting technically rigorous travel surveys that yield statistically significant findings on regional travel and congestion used to inform regional transportation planning and decision making.

- Regional Travel Survey (RTS)
- State of the Commute Survey
- Washington-Baltimore Regional Air Passenger Survey
- Intercity travel survey
- Commercial truck survey
- Transit ridership surveys
- Travel monitoring studies



# Regional Travel Survey (RTS)

- RTS is TPB's premier legacy data collection undertaking, providing the broadest understanding of the characteristics of travel in the region.
- Conducted since 1968, allowing for longitudinal comparisons of regional travel over time.
- Provides depth of information on both regional travel and those using the transportation system needed to estimate, calibrate, and validate TPB's travel demand forecasting model.
- Latest RTS is under way with first wave of invitations mailed to selected households this spring.



# State of the Commute Survey (SOC)

- The region's primary, triennial survey that measures commute behavior and helps TPB member jurisdictions better understand who is commuting to work, how, when, and why.
- Conducted last in 2025, the results of the SOC were presented to the TPB earlier this year at its February meeting.
- Different from RTS, which considers all regional travel, the SOC provides a deeper dive into the characteristics of commute travel.
  - Commute travel occurring in peak periods is a primary cause of recurring congestion in the region.

**2025 State of the Commute Executive Summary**  
Photo by Pierre Gaunard/COG

**FAST FACTS**

- Commuter Connections conducts a regional State of the Commute survey every three years—the 2025 survey is the sixth one.
- The result to provide a comprehensive look at how people travel to and from work, providing info to help shape Commuter Connections' free services and programs and informing area officials.
- The survey randomly sampled households from each of the 11 jurisdictions in the Commuter Connections service area.
- Over 7,500 completed surveys were received between April-June 2025.

**Commuter Connections Service Area**

Outer Ring  
Middle Ring  
Core

Frederick County  
Loudoun County  
Montgomery County  
Fairfax County  
Prince William County  
Arlington County  
City of Alexandria  
Prince George's County  
Charles County  
Calvert County

Virginia  
Maryland  
Washington, D.C.

**HIGHLIGHTS**

- Commuters' transportation modes have generally returned to pre-pandemic patterns, except for higher rates of telework in 2025.
- Almost half of the region's workers—48%—teleworked regularly in 2025, down from 65% in 2022 during the pandemic.
- Metrotransit satisfaction increased by 16 percentage points from 2022 to 2025.

Photo by ART Arlington Transit

Point your phone's camera at the QR code and follow the link to the 2025 State of the Commute interactive dashboard and full report.

**COMMUTER CONNECTIONS**  
A SMARTER WAY TO WORK



# METROPOLITAN AREA TRANSPORTATION OPERATIONS COORDINATION (MATOC)

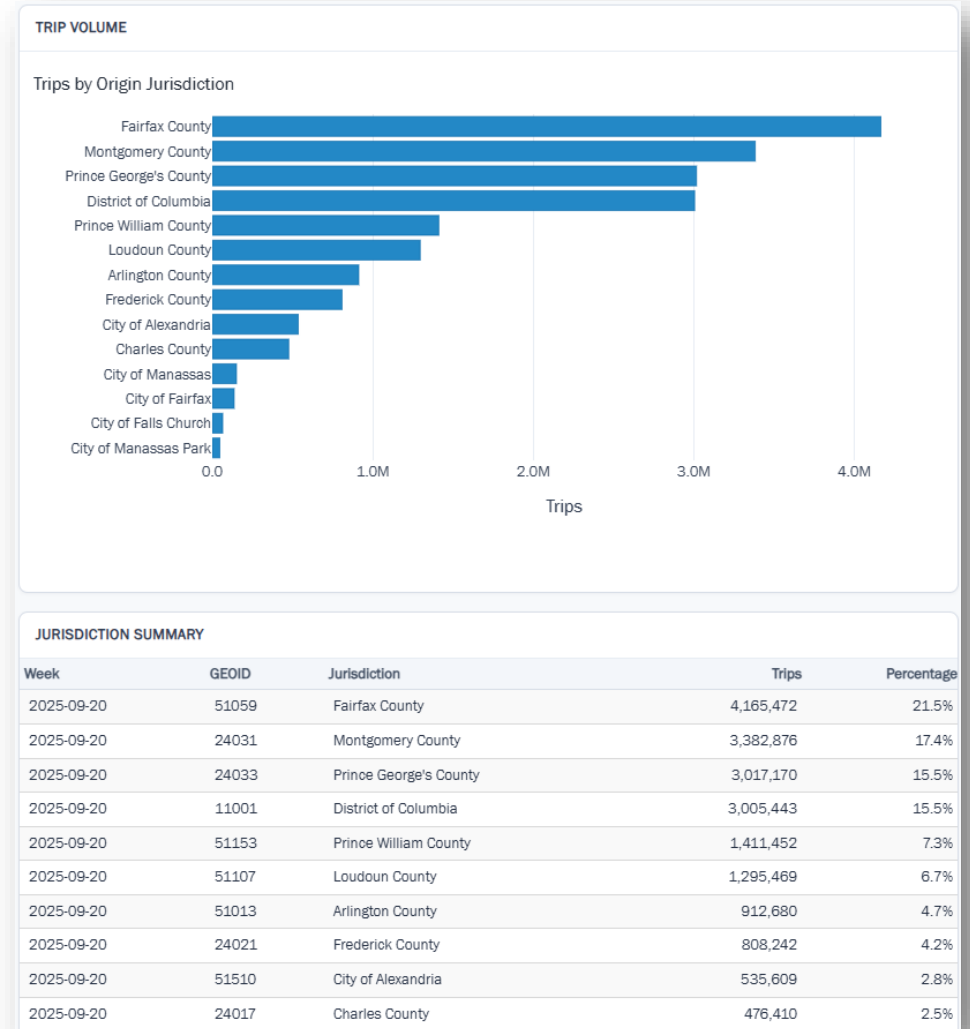
- Inter-agency operations program that facilitates enhanced coordination and information sharing and provides timely situational awareness on regional transportation operations
- MATOC briefing provided to TPB at its March meeting
- MATOC helps mitigate the effects of non-recurring congestion on the region's network by providing awareness and information that enables swift decision making to address regional incidents

Photo credit: Hutchison, Taran. MATOC Briefing for National Capital Region Transportation Planning Board, March 18, 2026



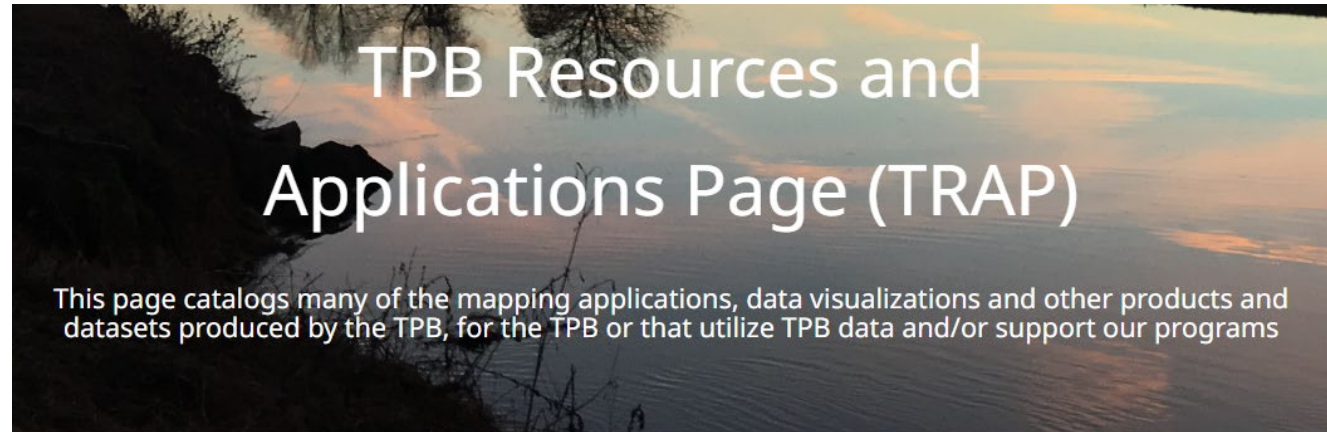
# Big Data

- New technologies have made travel data more accessible, understood, actionable, and therefore more useful.
- Data passively collected from mobile phones, connected vehicles, travel monitoring equipment and sensors, and other location-based data sources – Big Data.
- Analysts and planners better understand where travel is occurring on the network, where and when incidents occur, shifts in travel behavior resulting from incidents, and the implications of these patterns for regional travel and congestion management.
- Data is refreshed more frequently than field survey data, providing more timely insights into recent trends.
- Although Big Data is timely and innovative, it has limitations in scope and applicability.







# Enhanced Data and Visualization Tools

- TPB staff have developed interactive online visualizations to help inform greater understanding of regional travel and congestion
- These resources are made available through the TPB Resources and Applications Page (TRAP), which is accessible from this link: <https://trap-mwcog.hub.arcgis.com/>



## Categories

Explore data from each category below by clicking on the 'Explore' button

 <p><u>Long-Range Planning</u></p> <p>The long-range transportation plan provides a snapshot in...</p> <p>Explore</p>	 <p><u>Transit, including High-Capacity Transit (HCT)</u></p> <p>HCT is defined as Metrorail, Commuter Rail, Light Rail, Bus...</p> <p>Explore</p>	 <p><u>System Performance</u></p> <p>Congestion management, safety, freight, performance...</p> <p>Explore</p>	 <p><u>Active Transportation</u></p> <p>Travel options such as walking and bicycling, micromobility...</p> <p>Explore</p>
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# TPB Staff Will Demonstrate Examples of Online Congestion and Travel Analysis Tools



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**Transportation Planning Board**