

ITEM 9 – Information

November 20, 2019

Performance Based Planning and Programming: National Scan of MPO PBPP Targets

Background:

The board will be briefed on an assessment of the PBPP targets established by other Metropolitan Planning Organizations (MPOs) in the country, including the top 10 major urban areas as well as Baltimore and Richmond, in accordance with federal performance requirements.

NATIONAL SCAN OF MPO PBPP TARGETS

Performance Based Planning and Programming

Eric Randall, TPB Transportation Engineer

Transportation Planning Board
November 20, 2019

Agenda Item 9



National Capital Region
Transportation Planning Board

Presentation Outline

- PBPP Target-Setting Requirements
- PBPP Performance Areas
- MPOs used for comparison
- PBPP Area Performance Targets
- Summary of Findings



National Capital Region
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PBPP – Target-Setting Requirements

- Under MAP-21 and reinforced in the FAST Act, federal surface transportation regulations require the implementation of performance based planning and programming (PBPP) by state DOTs, metropolitan planning organizations (MPOs), and transit agencies

“transition to a performance-driven, outcome-based program that provides for a greater level of transparency and accountability, improved project decision-making, and more efficient investment of federal transportation funds.”
- Federal PBPP process requires State DOTs and MPOs to set targets (annually or every two/four years) for 26 performance measures
 - During 2018, MPOs across the nation – including the TPB – set performance targets for the most of the PBPP measures

Federal PBPP Performance Areas

- The federal PBPP rules have five main areas of performance planning for which the TPB must set targets and program projects accordingly:
 - Highway Safety
 - Highway Assets (Pavement and Bridge Condition)
 - Highway System Performance (Reliability, Freight, CMAQ Program)
 - Transit Assets
 - Transit Safety
- This national comparison focuses on the targets set for the three Highway performance areas
 - It is important to note that this is **not** a comparison of actual performance, only of adopted targets
 - Presumably MPOs set achievable targets close to actual performance, but may have incorporated buffers or margins

MPO Comparison – Top 10

- Compared the top 10 MPOs based on population, as well as neighbors Baltimore Region Transportation Board (BRTB) and Richmond Regional Transportation Planning Organization (RRTPO)
- Caveats for comparability
 - Targets based on normalized data are reasonably comparable, absolute numbers are not
 - Not all MPOs set targets for all measures; some adopted statewide targets, limiting comparability

Ranking	Metropolitan Planning Organization	MPO Population 2010
1	Southern California Association of Governments (SCAG)	18,051,203
2	New York Metropolitan Transportation Council (NYMTC)	12,367,508
3	Chicago Metropolitan Agency for Planning (CMAP)	8,444,660
4	Metropolitan Transportation Commission (MTC)	7,150,828
5	North Jersey Transportation Planning Authority (NJTPA)	6,579,801
6	North Central Texas Council of Governments (NCTCOG)	6,417,630
7	Houston-Galveston Area Council (H-GAC)	5,892,002
8	Delaware Valley Regional Planning Commission (DVRPC)	5,626,318
9	National Capital Region Transportation Planning Board (NCRTPB)	5,068,540
10	Atlanta Regional Commission (ARC)	4,819,026
18	Baltimore Region Transportation Board (BRTB)	2,662,204
53	Richmond Regional Transportation Planning Organization (RRTPO)	934,060

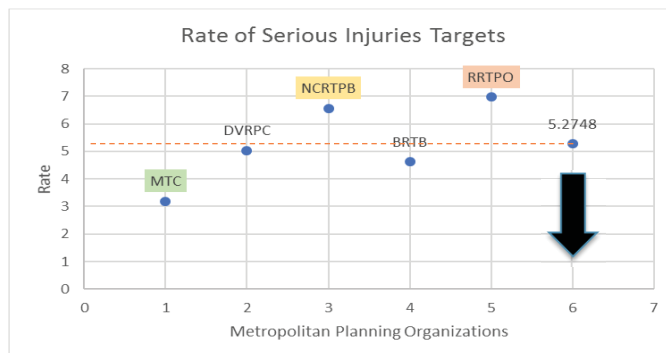
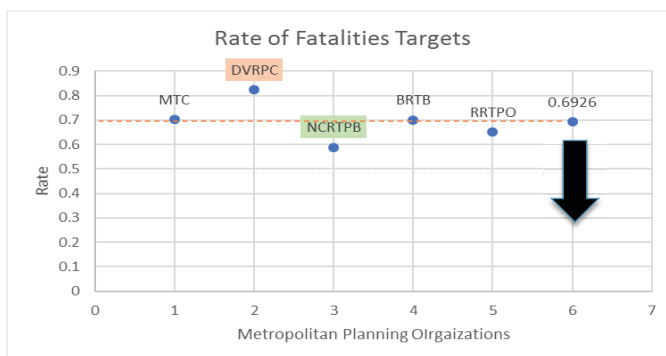
MPO Comparison Locations



Highway Safety Area

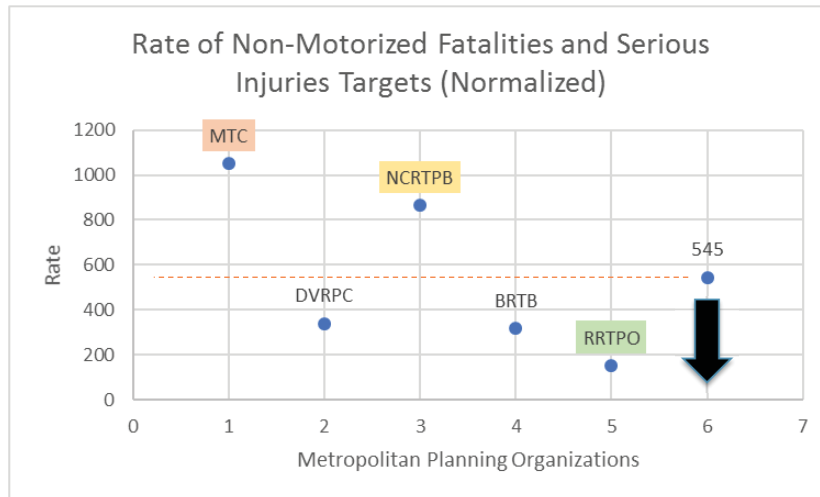
- Of the MPOs examined only five set Highway Safety Targets
 - MTC (*San Francisco*)
 - DVRPC (*Philadelphia*)
 - NC RTPB
 - BRTB (*Baltimore*)
 - RRTPO (*Richmond*)
- Graph Notes
 - MPOs ordered by population: largest to smallest (i.e., RRTPO)
 - “Best” target is highlighted in **Green**
 - “Least” target is highlighted in **Orange**
 - NC RTPB is highlighted in **Yellow** (if not one of the above)
 - Average is shown as data line and as rightmost value
 - The black arrow points in the direction the target should be going

Highway Safety Targets



- The Rate of Fatalities and Rate of Serious Injuries are normalized measures (number per 100 million vehicle miles traveled)
- TPB has the lowest Rate of Fatality target of the compared MPOs
- TPB’s target is above the average for the Rate of Serious Injuries target

Highway Safety Targets (Non-motorized)

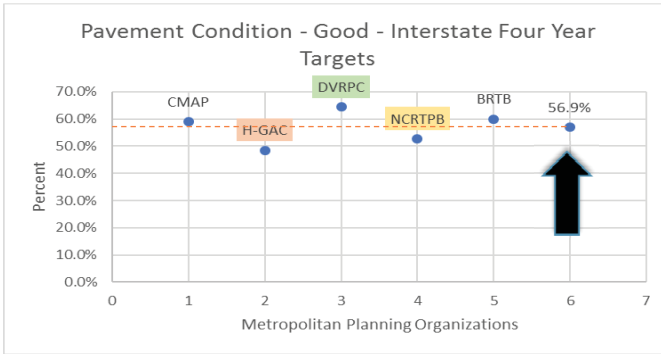


- The Number of Non-motorized Fatalities and Serious Injuries was normalized by MPO population to calculate a Rate of Non-Motorized Fatalities and Serious Injuries per capita
- TPB has a rate higher than the average of comparative MPOs

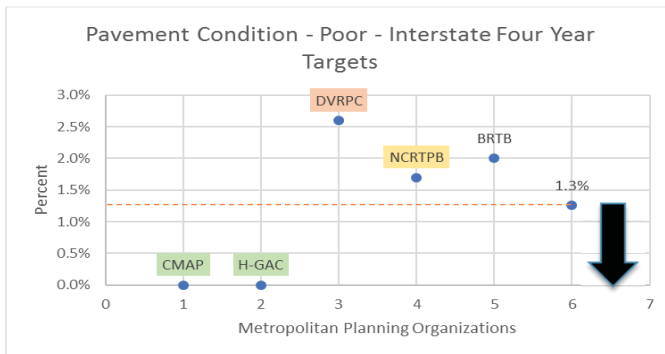
Highway Assets (Pavement and Bridge Condition)

- Of the MPOs examined, six set Highway Asset targets:
 - SCAG (*Los Angeles*)
 - CMAP (*Chicago*)
 - H-GAC (*Houston*)
 - DVRPC (*Philadelphia*)
 - NCRTPB
 - BRTB (*Baltimore*)

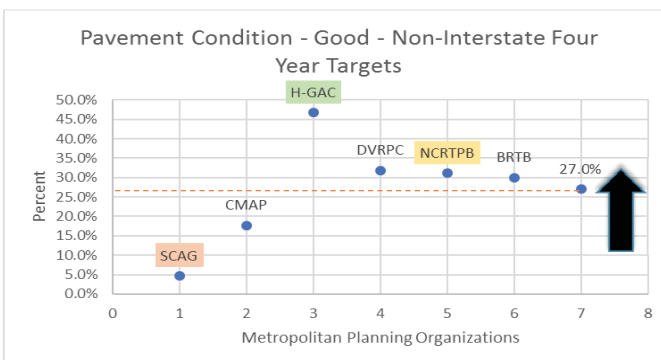
Highway Assets (Interstate Pavement)



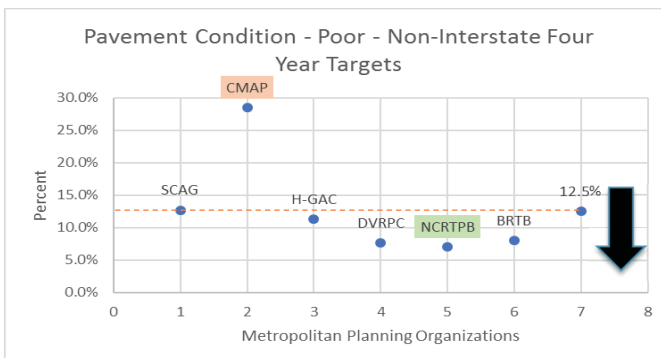
- The TPB's target for conditions on Interstate Pavement (Good/Poor) is near the average



Highway Assets (Non-Interstate NHS Pavement)

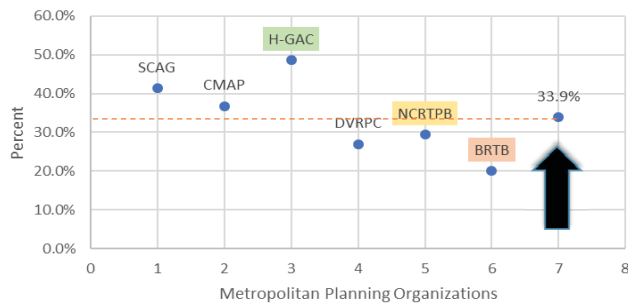


- The TPB has above average Non-Interstate National Highway System (NHS) road pavement condition targets



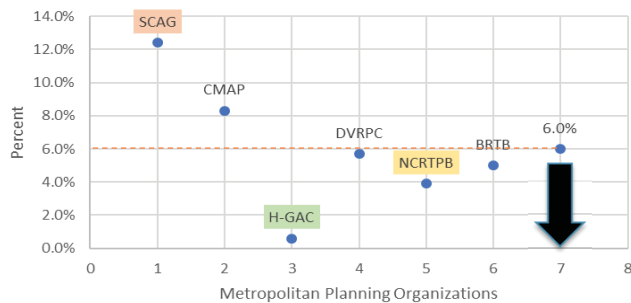
Highway Assets (Bridges)

Bridge Condition - Good - Four Year Targets



- In terms of Bridge Condition (Good) the TPB's target is slightly below the average target of comparable MPOs
- For Bridge Condition (Poor), the TPB's regional target ranks better than average

Bridge Condition - Poor - Four Year Targets

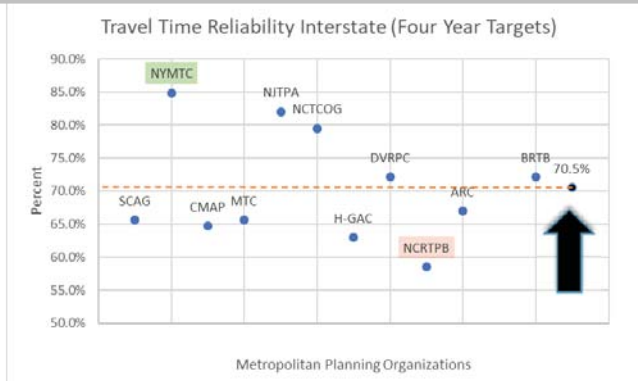


Highway System Performance Area

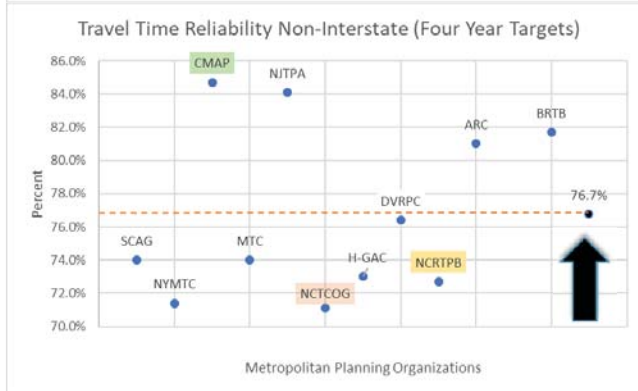
- All MPOs set Highway System Performance targets except:
 - RRTPO (*Richmond*)
- Comparable Highway System Performance targets include:
 - Travel Time Reliability (Interstate)
 - Travel Time Reliability (non-Interstate NHS)
 - Non-SOV Mode Share
 - Peak Hours of Excessive Delay (PHED)



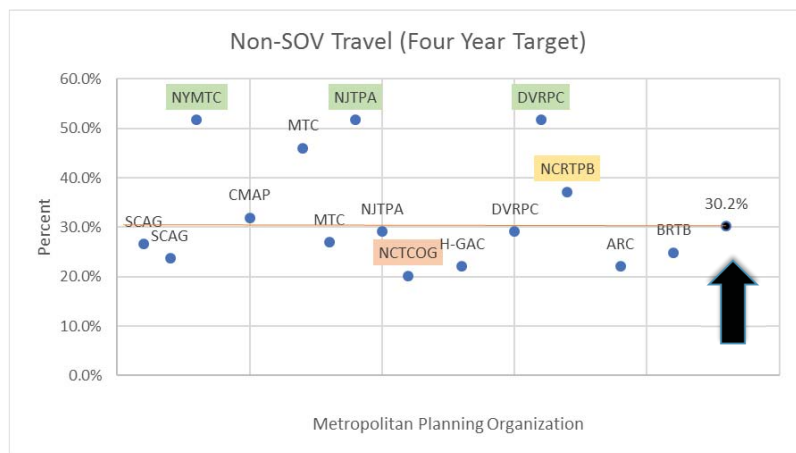
System Performance (Travel Time Reliability)



- For Travel Time Reliability, TPB's target is the lowest on the Interstate and below average for other roads on the NHS



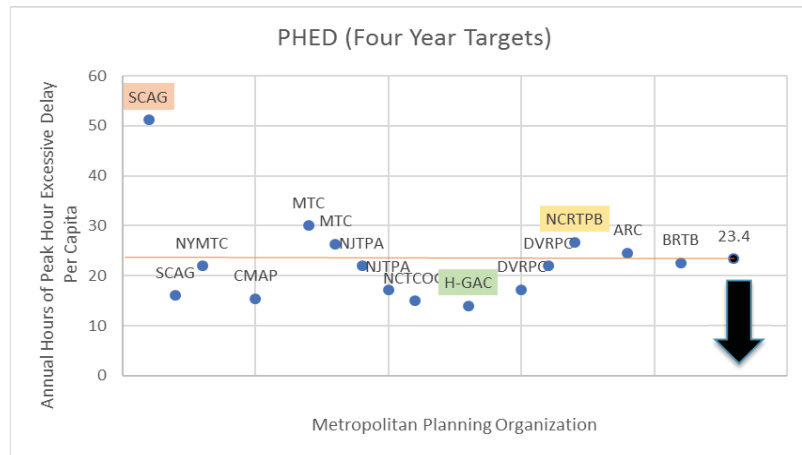
System Performance (Non-SOV)



- TPB has an above average non-SOV mode share



System Performance (Hours Delay)



- For Peak Hour Excessive Delay (PHED), TPB's target is above average

Summary of Findings

- When compared to the other MPOs, TPB is an exception, having set our own performance measure targets for all areas
 - The TPB targets are average or above average in performance measures concerning Highway Safety and Highway Assets
 - The TPB targets for Highway System Performance are below average, especially for the travel time reliability measure
- Future analysis could include:
 - Assess influencing factors for those MPOs with tougher targets
 - Compare actual performance as data becomes available in the future
 - *Why do other MPOs have better targets (performance)?*
 - *What can we learn from them?*

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TPB Measures and Targets

Performance Area	Measure	Metric	Adopted Targets as of February 22, 2019
Highway Safety	Five-Year Rolling Average	# of Fatalities	253.0
	Five-Year Rolling Average	Rate of Fatalities	0.588
	Five-Year Rolling Average	# of Serious Injuries	2919.6
	Five-Year Rolling Average	Rate of Serious Injuries	6.564
	Five-Year Rolling Average	# of Non-Motorized Fatalities and Serious Injuries	508.6
Highway Asset Condition	Percent Pavement Lane Miles Interstate / NHS (excl. Interstate)	In Good Condition	52.7% / 31.1%
	Percent Pavement Lane Miles Interstate / NHS (excl. Interstate)	In Poor Condition	1.7% / 7.0%
	Percent Bridge Deck Area	In Good Condition	29.4%
	Percent Bridge Deck Area	In Poor Condition	3.9%
Highway Reliability	Percent Person Miles Traveled Interstate / NHS (excl. Interstate)	Level of Travel Time Reliability	58.5% / 72.7%
Freight	Index	Truck Travel Time Reliability	2.12
Congestion	Annual Hours per Capita	Peak Hour Excessive Delay	26.7
	Percentage	Non-SOV Travel	37.2%
Vehicular Emissions	Total Emissions Reduction (kg/day)	VOCs / NOx	2.195 / 4.703

