

12. REALIABILITY, CONGESTION, AND AIR QUALITY PERFORMANCE MEASURES AND TARGETS

BACKGROUND

A performance-based transportation planning process is a federal requirement for the development of the Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP). Federal legislation established Transportation Performance Management (TPM) to focus federal transportation investments on addressing challenges and improving performance on the National Highway System (NHS). Performance management provides a valuable framework for tracking regional transportation performance over time and demonstrating progress toward regional goals for improving the efficiency, reliability, and overall performance of the transportation system.

The performance management process includes collecting and analyzing data, developing quantitative forecasts, establishing performance targets, monitoring transportation system conditions, and reporting progress toward those targets. This process enables transportation agencies to identify performance trends, evaluate the effectiveness of transportation investments, and inform future planning and programming decisions.

The next federal performance period covers four years, from 2026 through 2029. H-GAC is responsible for monitoring and reporting on federal performance measures related to person and freight travel-time reliability, congestion, and tailpipe emission reductions from Congestion Mitigation and Air Quality Improvement Program (CMAQ) projects. In 2022, the Transportation Policy Council (TPC) adopted performance targets for 2024 and 2026 for these measures. These targets provide a basis for evaluating regional progress and supporting performance-based transportation planning and investment decisions.

CURRENT SITUATION

H-GAC has completed the current four-year federal performance period and is therefore required to report progress on previous performance and establish new targets for reliability, congestion, and air quality measures.

Over the past three months, H-GAC staff have been gathering and analyzing data, researching underlying conditions, and assessing progress toward achieving the 2026 targets, as well as considering recommendations for setting 2028 and 2030 targets. Approximately 50% of the 2026 performance targets were achieved. There are no penalties if the targets are not met. H-GAC staff have been reviewing past performance and formulating draft target recommendations based on forecasted growth in population, vehicle miles traveled, and potential construction activity on the NHS system. Moreover, staff are recommending targets based on actual performance in the post-pandemic years to avoid relying on conditions experienced during the pandemic and to establish targets that more accurately reflect current and expected regional transportation trends. This approach is intended to ensure that the proposed 2028 and 2030 targets are realistic and appropriately aligned with anticipated changes in travel demand, population growth, and transportation system conditions. A summary of the 2026 performance and proposed draft projects are provided in Tables 1-3.

Table 1. PM3 - Reliability						
Federal Performance Measures	Desired Trend	2026 Target	Actual Performance	2026 Target	2028 Target	2030 Target
Interstate Reliability		71%	65.6%	No	62%	57%
Non-interstate Reliability		77%	78.1%	Yes	76%	73%
Truck Travel Time Reliability Index		2.2	1.9	Yes	2.0	2.0

Table 2. PM3 - Congestion						
Federal Performance Measures	Desired Trend	2026 Target	Actual Performance	2026 Target	2028 Target	2030 Target
Peak Hour Excessive Delay - Houston		17 hours	17.9 hours	No	19 hours	20 hours
Peak Hour Excessive Delay – The Woodlands Conroe		8 hours	15.4 hours	No	16 hours	18 hours
Non-Single Occupant Vehicles Travel - Houston		22.6%	29.3%	Yes	30%	30%
Non-Singles Occupant Vehicles Travel – The Woodlands Conroe		21.6%	28.3%	Yes	30%	30%

Table 3. PM3 - Air Quality					
Federal Performance Measures	2026 Target	Actual Performance	2026 Target	2028 Target	2030 Target
Nitrogen oxides (NOx kg/day)	601.465	172.542	No	330.71	369.8
Volatile organic compounds (VOC kg/day)	172.864	72.432	No	36.025	47.281

Staff will continue to work with the Transportation Improvement Program (TIP) subcommittee and the Technical Advisory Committee (TAC) to review and finalize the draft targets and reporting. Staff will bring this item to the TAC and TPC for action in September 2026.

ACTION REQUESTED

For information and discussion.