

Questions and Answers from FHWA Transportation Performance Management (TPM) Implementation Workshops

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These answers are based on notes taken during the workshop. **None of this should be construed as formal FHWA guidance.** *Text in italics represents my understanding of the rules, based on information provided by FHWA at the workshop, and/or from reading the final rule text.*

PLANNING PROCESS

1. For the Performance-based elements of the MTP, FHWA requires, “...*agreement between MPOs, State and public transit providers on performance data collection, targets and reporting for [the] metropolitan area.*” How formal does this agreement have to be? Does it have to be a signed MOU (or something along those lines) that would be adopted by all of our respective Policy Boards, or can it just be a general verbal agreement?

Agreements must be written, and among state DOT, MPOs, and public transit agencies (other agencies like turnpikes can be included, but are not required). Agreements need to include 5 items:

1. *Coordination on target setting*
2. *Data collection*
3. *Data analysis*
4. *Reporting on progress toward target achievement*
5. *Data collection for NHS asset management plan*

The deadline for these agreements is 2 years after each planning rule:

- a. *By May 27, 2018, the agreement needs to cover safety and transit asset performance measures (but can cover all);*
- b. *By May 20, 2019, the agreement needs to cover all performance measures (except for transit safety measures, which will need to be covered by 2 years after the final rule on those measures).*

FHWA has collected a few (5-6) agreements from states, but none qualify as “best practice” (all have areas for improvements), so FHWA has not shared any yet. They are working with each state to improve their draft agreements. FHWA is hesitant to send out a template, because they don’t want to imply that it would be the only format acceptable. They want to maintain flexibility for states to address local specific conditions. Of the agreements that FHWA has seen, most were MOUs, but one was an amendment to the MPA, and one was an update to Standard Operating Procedures, accompanied by an MOU that adopts the SOPs.

In addition to an agreement with NJDOT and NJ TRANSIT (and PANYNJ?), NJTPA will also need to have agreements on the first 4 required TPM elements with the other MPOs and DOTs with which we share urbanized areas. This may mean amending the MAP Forum MOU for the NYC UZA, but we will also need to have an agreement with the multiple entities in the Philadelphia UZA. It does not seem to make sense to have one agreement to cover everything, because the Philadelphia UZA involves several other MPOs and states, all of which will likely need agreements for other UZAs. Because these UZA-level agreements deal with CMAQ performance measures, they need to be in place by May 20, 2019.

Agreements do not need to be submitted to FHWA (and are not subject to FHWA approval), but should be shared with your FHWA division office. In addition, FHWA HQ is looking for best practice agreements to share with other states.

2. When do MTPs and TIPs need to meet the new TPM requirements?

Both updates **and amendments** to MTPs and TIPs trigger TPM requirements.

- a. Any MTP adopted **or amended** on or after **May 27, 2018** has to document safety **and transit asset** targets, and include a systems performance report (SPR) that addresses safety performance measures (baseline, targets, impact of MTP on ability to meet targets, etc.). Any TIP adopted or amended after May 27, 2018 needs to document the impact of the TIP on the impact on achieving safety and transit asset targets.
 - b. Any MTP adopted **or amended** on or after **May 20, 2019** has to document all FHWA targets (safety, pavement/bridge, system performance, freight, CMAQ) and transit asset targets, and include an SPR that addresses all performance measures (baseline, targets, impact of MTP on ability to meet targets, etc.). Any TIP adopted or amended after May 20, 2019 needs to document the impact of the TIP on the impact on achieving all targets.
 - c. “Administrative” TIP amendments do not trigger requirements. Only amendments that trigger public involvement requirements.
 - d. Amendments only trigger requirements during the first MTP/TIP cycle. In other words, if the MTP/TIP already meets the TPM requirements by including the appropriate TPM sections, amendments don’t trigger updates to the TPM sections.
 - e. Harlan Miller confirmed (when asked by NYSDOT) that targets do NOT have to be in the MTP in order to discuss the impact of the TIP towards their achievement.
3. When the TIP is amended, does the analysis need to document the impact of the new projects on achieving targets?
- TIP discussion of the impact on target achievement is on the program as a whole, not individual projects. The discussion can reference how the TIP is implementing the recommendations of other performance-based plans (e.g., TAMP, SHSP, etc.).

TARGET-SETTING (general)

4. The federal regulations require State DOTs (and urbanized areas over 1 million) to “set” 2-year and 4-year targets by May 20, 2018. However, these targets do not have to be reported to FHWA until October 1, 2018. Given that: 1) there are more than four months between these two dates; 2) there may be data updates and/or policy changes between May 20 and October 1; 3) the targets do not have to be reported to anyone by May 20; and 4) in subsequent biennial cycles, targets are set and reported by October 1; are State DOTs allowed to make changes to their targets between May 20 and October 1, 2018? What is the check that they are established by May 20, and what is the penalty if they are not set by that date? If a State DOT does not meet the May deadline, does that mean that the corresponding MPO(s) would still have 180 days once the State DOT does set their targets?

FHWA did not have a clear response to these issues. They said that they wanted to make PM2 and PM3 rules effective ASAP, due to the impact on the implementation of other rules (e.g., the planning rule). Pete Stephanos from HQ did say that, “What happens between May and October...happens,” and, “Don’t get too hung up on those months.”

He confirmed that states do not have to report the targets until October, and sort of implied FHWA flexibility if states chose to modify their targets between May and October. However, there was not uniform agreement on the exact date that initial targets were due—one FHWA presenter insisted that initial targets were due on May 19, 2018, while everyone else said May 20, 2018.

5. What is the anticipation for public involvement in target setting?
FHWA has no specific requirement for public involvement in the initial target setting. Public involvement requirements are on the regular planning process, so as MTPs and TIPs start including performance targets, there will be public involvement in these documents. Also, if targets are adopted by MPO Board, then public will be able to comment on these actions.
6. Is it expected that MPOs will take formal actions to adopt targets?
FHWA encourages MPOs to use their “normal” planning process to adopt performance targets. It should have “official” standing and demonstrate regional concurrence. This is expected to be a Board adoption, but could be another mechanism if part of the MPOs regular planning process (e.g., another formal mechanism allowed in MPO bylaws).
7. For an MPO and/or state that only has a small portion of a particular UZA, what is the level of coordination involvement that is expected in target setting?
FHWA indicated that they would “leave it up to individual MPOs and states to figure out” the necessary level of coordination involvement.
8. What options do multi-state MPOs have for setting regional targets?
Multi state MPOs have two options for target setting: 1) They can set one regional target; or 2) They can support each state’s target. MPO targets are due 180 days after the last state sets targets.

REPORTING (general)

9. What is the specific *MPO* role in the production of the Biennial Performance Reports? Do we report our progress under the various measures to NJDOT who will submit the actual report, or do we submit our own separate report?
MPOs, where any part of a nonattainment or maintenance areas within the MPO region overlaps the boundary of an urbanized area with a population over 1 million, must prepare a CMAQ Performance Plan, and submit it to the state DOT for inclusion in the biennial report. This is the only formal contribution of an MPO to the biennial reports. However, the biennial report does discuss targets, and the MPO should participate in setting those targets. MPOs are also required to include a “system performance report” in their metropolitan transportation plan (MTP), as discussed below (question 10).
10. What are the required components of the system performance report, how extensive is it expected to be (a few paragraphs, or several pages), and does it need to be a stand-alone section of the MTP, or can the required components be weaved throughout the narrative of the MTP? The regulations state that the system performance report must include “baseline condition/performance and progress toward the achievement of...targets” (§490.107(c)(2) and §450.324(f)(4)), but further guidance is needed on required components and formats. Can we not use elements (at least) of the State Performance Reports?
Guidance on system perform reports is under development, and expected to be released late summer/fall 2017.
11. What is required in the CMAQ Performance Plan?
As indicated above (question 9), only MPOs that contain nonattainment or maintenance areas that overlap the boundary of UAs with over 1 million people are required to prepare a CMAQ Performance Plan. FHWA indicated that they hope that guidance will be issued on these plans in October 2017. Note that each applicable MPO’s CMAQ Performance Plan must include all three CMAQ performance measures, *even though two of the three are calculated for the entire UZA.*

CMAQ- mobile source emissions

12. Do MPOs have the option of supporting state targets for this measure, or are they required to set quantifiable targets for the portions of any non attainment areas within their planning area? What if

there are multiple non attainment areas? What if one NA area overlaps an urbanized area over 1 million and another doesn't?

If an MPO contains any nonattainment or maintenance area that overlaps any urbanized area with over 1 million people, then they are required to set quantifiable 2-year and 4-year targets for the CMAQ mobile source emissions reduction measure. (Note that this is the same as the requirement to prepare a CMAQ Performance Plan. Thus, if an MPO has to prepare a CMAQ Performance Plan, they have to set quantifiable 2-year and 4-year targets for mobile source emissions, and vice versa.) If an MPO contains nonattainment or maintenance areas that only overlap urbanized areas with less than 1 million people, then they have the option of setting a quantifiable 4-year target, or supporting the state's 4-year target (no 2-year target is required). Because the MPO sets targets for the entire MPO region, there is no need to distinguish between nonattainment areas that overlap UAs above or below 1 million people.

The first applicability determinations will be made by FHWA on October 1, 2017 (for the 2018-2021 performance period). Note that new Ozone standard designations are anticipated to be made by USEPA in December 2017, but not effective for 2 years.

FHWA clarified that if an MPO is deemed not to be applicable in October 2017, they are not applicable for the entire 4-year performance period, thus would not have to worry until new determinations are made on October 1, 2021 (for the 2022-2025 performance period). However, if an MPO meets the requirements on October 1, 2017, there will be a redetermination on October 1, 2019, so if an area falls out of nonattainment/maintenance status by that date, the MPO does not have to continue for the second half of the 4-year performance period.

FHWA noted that the term "maintenance area" only applies to those areas still in the first 20-year maintenance plan. If your area is past the 20-year mark, you should let FHWA know.

13. We would like some clarification on the CMAQ--On-Road Mobile Source Emissions Measure and its applicability to the SJTPO region, with less than a 1 M population. As we understand it, this rules applies to the entire nonattainment area which; in our case, includes Philadelphia and Wilmington, DE. However, it looks like for areas under 1 M population we only have to establish 4-year targets, as opposed to 2- and 4- year targets. However, if the measure applies to the entire nonattainment area, must we not work with the larger MPOs (DVRPC) in both establishing and meeting their targets?

If any of the nonattainment or maintenance areas within the SJTPO overlap the Philadelphia urbanized area (which has more than 1 million people), they are required to set quantifiable 2-year and 4-year targets for CMAQ mobile source emissions. However, the targets are set specifically for the SJTPO region (not for the entire nonattainment area), so they are separate from targets that DVRPC sets.

14. In NJ, much of the CMAQ funding is "flexed" to FTA and programmed by NJ TRANSIT. We have found that many of these projects (and their emissions benefits) are not found in the CMAQ Public Access System. (For example, within NJ, the Public Access System includes 9 projects in FY 2014, totaling \$11.7 million in CMAQ funding, 19 projects in FY 2015, totaling \$38 million, and 9 projects in FY 2016, totaling \$186.9.) Can this be addressed?

Cecilia Ho mentioned that this issue was noted during the recent CMAQ audit that included NJ. She suggested that there may be a way to go back to the Public Access System and retroactively enter these projects (typically, FHWA "freezes" this database, but they may be able to make an exception). We would need to determine which additional projects (from FY 2014 through FY 2016) need to be added, and estimate the emissions reduction benefits from each project.

*Going forward (starting with FY 2017), we should make sure to include **all** CMAQ-funded projects and their benefits in the report to the Public Access System (by March 1 of each year; thus CMAQ projects from FY 2017 need to be reported by March 1, 2018).*

To check what is in the CMAQ Public Access System, go to https://fhwaapps.fhwa.dot.gov/cmaq_pub/ and navigate to the Reports tab.

15. If a CMAQ-funded project extends outside a nonattainment or maintenance area, how should we reflect the emissions reduction benefits of this project?
FHWA indicated that, for regional or state-wide CMAQ projects (assuming that the impact region includes a nonattainment or maintenance area), the entire amount of emissions reduction reported to the Public Access System should be used.
16. How should the baseline value for this measure be calculated?
The baseline (“latest data collected”) should reflect projects in the previous 4 years. For the first performance period, the baseline would include projects from FY 2014 through FY 2017.
17. Because the targets are set to reflect the next 2 and 4 years’ worth of CMAQ projects, when setting these targets, should MPOs merely look at their 4-year TIPs and identify anticipated emissions benefits from any CMAQ-funded projects that are within nonattainment or maintenance areas?
In addition to estimating anticipated emissions benefits from programmed CMAQ projects, MPOs should consider the risks that not implementing individual projects may have on target achievement. The 2-year target will be compared against emissions benefits from projects that are authorized in FY 2018 and FY 2019. The 4-year target will be compared against emissions benefits from projects that are authorized in FY 2018 through FY 2021.

CMAQ- non-SOV travel

18. If UZAs opt for Method B (local surveys) to calculate this measure, how frequently would these surveys need to be undertaken?
Based on the requirement that survey data be no older than 2 years from the measurement date, and given that this measure needs to be calculated every 2 years, the surveys would need to be conducted at least every 2 years. FHWA noted that this is similar to the ACS, which is available 2 years after the last year in the five-year period (e.g., by October 1, 2018, the 2012-2016 5-year ACS will be available).
19. Confirm that there are no regulatory penalties (not even reporting requirements) for not meeting Non-SOV Travel targets.
FHWA confirmed that they will not be determining “significant progress” on any CMAQ measure, which include non-SOV travel, PHED, and emissions reductions. FHWA will only be determining significant progress for the measures supporting the NHPP and NHFP programs. Thus, there are no regulatory implications for failing to meet these targets.

CMAQ - PHED

20. Since SJTPO shares two Urbanized Areas with the DVRPC region (Philadelphia, and Vineland, NJ), must we *always* coordinate with them on this specific performance measure? Do we need to establish separate targets? What if the SJTPO part of the urbanized area was to meet our targets and the DVRPC part of this urbanized area was not (or vice-versa); would we both be penalized?
UZA measures are only required to be calculated, and targets set, for the entire UZA. *Thus, SJTPO must always coordinate with DVRPC on these UZA measures for both UZAs (during the first performance period only on UAs above 1 million people, subsequently all UAs above 200,000 people). There are no separate required targets within each MPO (if an MPO wishes to set additional targets for other measures and/or areas, they are allowed to do so, but they are not required). There*

are never any penalties for MPOs failing to meet targets. See above (question 19) about penalties for the UZA-level (CMAQ) targets.

21. Regarding urbanized areas, which boundaries are to be used, the Census-established ones, or the State DOT-modified ones?
- Section 490.103(b) states that "The boundaries of urbanized areas shall be identified based on the most recent...Census, unless FHWA approves adjustments to the urbanized area...and these adjustments are submitted to HPMS."
 - If the State DOT-modified urbanized areas are supposed to be used, how are Census data (population, JTW mode share, etc.) on these adjusted urbanized areas to be obtained? The Census reports on its own urbanized area boundaries, not adjusted ones.
 - However, if the Census-established urbanized boundaries are to be used, then how is this consistent with what the State DOT reports to the HPMS?

FHWA confirmed that State DOT-modified urbanized areas should be used to determine which NHS facilities are within urbanized areas, but that "official" Census boundaries should be used for the population and non-SOV mode-share data elements. On October 1, 2017, FHWA intends to publish a list of applicable UAs.

22. How should we calculate the speed limit on TMCs where the speed limit changes in the middle of a TMC?

FHWA intends to provide guidance on this issue. The guidance will likely be either to use a distance-weighted speed limit, or to use the speed limit for the longest portion of the TMC.

23. What about roadway segments where the PSL is less than 20 mph? As written, these segments would be contributing to excessive delay even when vehicles are traveling at the speed limit. Note that, based on the NJDOT speed limit database, there are indeed some (short) segments of NHS in NJ that have PSLs below 20 mph.

The rule states to use the larger of 20 mph or 60% of the posted speed limit, so in the rare instances when the speed limit is below 20 mph, travel at the speed limit will be considered "excessive delay." Rich Taylor said that it was his understanding that the rationale for having a "floor" of 20 mph was that studies show that this is the speed at which maximum emissions occur.

24. Section 490.709(c)(2) states that "State DOTs shall assign hourly traffic volumes to each reporting segment by hour..." Do State DOTs have the flexibility to determine whether the hourly traffic volumes can be assigned using either: 1) a standard hourly distribution that applies to all weekdays in the year, 2) a different distribution for each day of the week (i.e., a Monday distribution, a Tuesday distribution, etc.), 3) a different distribution for each month or season, or 4) a different distribution for each day of the year?

States have flexibility on how to calculate the hourly traffic volumes. While they must report their method to FHWA, it will not be subject to FHWA approval.

25. For the PHED measure in a multi state UZA, can person-hours of delay be calculated within/by each state using different analytical tools (but the same travel time data set), and then added up for the entire UZA?

As long as the states use the required calculation procedures and the required data elements (e.g., NPMRDS or approved equivalent), there should be no reason why person-hours of excessive delay could not be calculated separately by each state and then added together for the UZA-level measure.

26. Confirm that there are no regulatory penalties (not even reporting requirements) for not meeting PHED targets.

See response to question 19.

27. How are the 5-minute NPMRDS data supposed to be combined into 15 minute intervals, and will the method be different if there are one or two 5-minute intervals within the 15-minute slice that have

missing data? What if one of the three 5-minute travel times appears to be an outlier (either much lower or much higher than the other two travel times)? In the latest NPMRDS Version 2 quarterly webinar, CATTLab discussed how they have approached developing 15-minute travel times, but noted that they were providing data aggregation at various time intervals as a “bonus” (not required in the contract), so it was unclear as to whether they were relying on FHWA guidance, or whether they had designed the aggregation rules themselves.

Rich Taylor stated that the method that the CATTLab uses can be considered “approved” by FHWA.

28. The NPMRDS version 2.0 starts in February 2018, and may be significantly different from NPMRDS version 1.0 due to differences in level of detail in segmentation. Further, the NPMRDS version 1.0 only goes back to November 2013 (which would give less than 5 years of historical data). There is a requirement in the federal regulations that states gain approval of “equivalent” travel time data sets (which must meet certain specific requirements). However, in order to set meaningful targets, it may be useful (and prudent) for State DOTs and MPOs to use other available historical travel time data sets to examine past performance trends. Given that these other available historical travel time data sets likely do not meet the regulatory requirements for “equivalent” data sets (on page 5987, the Final Rule states that FHWA is not aware of any currently available commercial data set that does meet the requirements), can these non-approved, non-equivalent travel time data sets still be used to assist State DOTs and MPOs in setting targets?

Data requirements are only for reporting the baseline and measuring progress, so states are free to use other data sets in setting targets. However, Rich Taylor cautioned to be careful when using other data sets that may give different results from the “official” ones, and that may even track differently over time. He said that he expects that the initial round of target-setting, on the travel time-based measures particularly, will be very conservative and be based solely on the baseline measure value.

In addition, Rich mentioned that there may be guidance forthcoming that allows the initial baseline measure to be calculated solely with NPMRDS Version 2 data (i.e., from February to December 2018), instead of requiring the baseline to be calculated for the entire calendar year. This is because the NPMRDS Version 2 started with February 2018 data.

29. What are typical values for PHED per capita?

TTI did an analysis using NPMRDS Version 1 for various urbanized areas, and found that values ranged from 1.7 to 6.7 hours of excessive delay per capita.

RELIABILITY (LOTTR)

30. On FR Page 5986, it states that, “The FHWA intends to develop guidance to assist State DOTs and MPOs in the processing of segments to calculate metrics. The final rule does not specify how segments that cross boundaries should contribute to the metric. It is anticipated that data processing guidance will recommend that segments should contribute to the metric only if the entire length of the segment is contained within the applicable area.” When will this data processing guidance be released?

Assuming it is approved, FHWA indicated that the guidance will be that only TMCs entirely within an urbanized area (or within an MPO boundary) should be used for calculating measures on that geography.

31. Confirm that TMCs longer than 1 mile in NPMRDS meet the regulatory requirements.
FHWA confirmed that the restrictions on reporting segment length only applies when combining individual travel time segments (the unit that travel times are obtained from the vendor, which would be TMCs in the case of NPMRDS) into larger reporting segments. If using the NPMRDS, “travel time segment” is equivalent to TMC. Thus, FHWA confirmed that individual TMCs longer than 1 mile in the NPMRDS qualify as reporting segments.
32. 490.511(b)(2) does not specify that these percentiles be rounded to the nearest second before calculating the LOTTR metric. Should they be?
Rich Taylor was unsure whether the travel time percentiles should be rounded before calculating the LOTTR metric. On the one hand, this would add complexity into the formula for calculating the metric, but on the other hand, the percentiles are required to be reported to FHWA to the nearest second, so if FHWA were to calculate the LOTTR metric from the reported values, they may get different answers than the metric calculated from unrounded values. When I asked a similar question at the freight session, that person surmised that the TTTR metric should be calculated using unrounded percentiles. Rich Taylor indicated that they would consider this question and issue clarification so that everyone would calculate the metrics the same way.
33. Will there be guidance on geographic specificity for vehicle occupancy data?
Rich Taylor was unaware of what the FHWA policy office will be providing for the occupancy factor, but that state DOTs and MPOs were free to use better data to assign average vehicle occupancy (AVO) at any geographic scale (state, MPO region, corridor, etc.). He also stated that state DOTs and MPOs should use the same AVO for any particular road segment.
34. Regarding equivalent data sets, on FR Page 5987, it states that, “The FHWA is not currently aware of any commercial data set that is 'equivalent.'” Is this still the case? For example, what about an archived real-time data set (e.g., from INRIX) that has a field indicating whether the record reflects actual or historical data. If only records that reflect actual real-time data are used, would that then qualify as an “equivalent data set?”
FHWA is working with commercial data vendors who wish to be pre-approved by FHWA. (Side conversations with Rich Taylor indicated that HERE was asking for preapproval of an extension of their NPMRDS Version 1 data product, but that Inrix was happy with their NPMRDS Version 2 product.)
Of note, Rich Taylor mentioned that his understanding was that the same data source needed to be used for all performance metrics calculated for a single reporting segment (TMC), but that different data sets could be used for different reporting segments. That would mean that, because there does not seem to be another commercial source for truck travel times other than NPMRDS, only NPMRDS would work for Interstate TMCs. However, because the truck performance measure is only calculated for the Interstate system, the non-Interstate NHS could use another source of “all traffic” travel times, as long as it did not include any imputed travel time records.
State DOTs and MPOs are welcome to discuss potential “equivalent data sets” with FHWA (but should do so in advance of the October 1, 2017 deadline to request approval).
35. What is the process for FHWA to approve an equivalent data set?
There is a deadline for states to submit equivalent data sets for approval to FHWA by October 1, 2017 (for use in the first performance period). FHWA is about to release guidance to division offices on this process.
36. What is the rationale for using the 80th percentile in the LOTTR metric versus the 95th percentile in the TTTR (freight) metric?
The LOTTR metric was targeted toward operational strategies, and research has shown that operational strategies have more of an impact on the 80th percentile travel times than the 95th

percentile. On the other hand, the TTTR metric was targeted toward showing the performance of the Interstate system for the freight industry, which uses the 95th percentile travel time to plan for just-in-time deliveries.

FREIGHT (TTTR)

37. For the TTTR metric, Section 490.611(a)(3) does not specify that the 95th and 50th percentiles be rounded to the nearest second before calculating the TTTR metric. Should they be?

FHWA indicated that percentiles do not need to be rounded before calculating the TTTR metric, because this would add unnecessary complexity into the calculation. However, see the response to the similar question for LOTTR (question 32).

38. How should states handle work zones?

For calculating the measure, work zones should not be excluded, as they represent actual conditions of the system. However, when setting targets, states need to consider upcoming construction plans and account for any potential impacts that the associated work zones may have on the measures.

GUIDANCE:

39. Is the full comment response document available?

This document has been prepared and is under review.

40. Is there a unified schedule of all of the various deadlines for the TPM regulations?

This document has been prepared and is under review.

Other notes

41. NH MPOs (4 in state) had a SHRP2 grant for performance management, including supplemental measures, coordination, and standardized system performance report.

(https://www.trafford.org/cmsAdmin/uploads/synthesis-report_final.pdf)

42. Check out the Maryland DOT TPM website

(<http://www.mdot.maryland.gov/newMDOT/Planning/Excellerator/MDOTExcellerator>)