

Performance Management 3 Target Setting Whitepaper – Year-One

On January 18, 2017, the Federal Highway Administration (FHWA) published a final rule in the Federal Register (82 FR 5970) that established performance measures that State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) will use to report on the performance of the Interstate and Non-Interstate National Highway System (NHS) to carry out the National Highway Performance Program (NHPP); freight movement on the Interstate system to carry out the National Highway Freight Program (NHFP); and traffic congestion and on-road mobile source emissions for the purpose of carrying out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. The rule addressed requirements established by the Moving Ahead for Progress in the 21st Century Act (MAP-21), and included six national performance measures related to System Performance, as follows:

- Percent of Reliable Person-Miles Traveled on the Interstate;
- Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS;
- Percentage of Interstate System Mileage Providing Reliable Truck Travel Time (Truck Travel Time Reliability Index);
- Total Emissions Reductions by Applicable Pollutants under the CMAQ Program;
- Annual Hours of Peak-Hour Excessive Delay Per Capita (PHED); and
- Percent of Non-Single Occupancy Vehicle (Non-SOV) Travel.

Federal regulations require State Departments of Transportation (State DOTs) to establish and report annual targets related to each of these six performance measures by May 20th of each year. MPOs shall establish a target six months after State DOTs establish targets (November 16th) by either: 1) Agreeing to plan and program projects so that they contribute toward the accomplishment of the State DOT system performance target for that performance measure; or 2) Committing to a quantifiable target for that performance measure for their metropolitan planning area. In addition, State DOTs and MPOs with NHS mileage in applicable urbanized areas must agree to single, unified PM3 targets for the PHED and Non-SOV performance measures.

State DOTs may adjust an established 4-year target in the Mid-Performance Period Progress Report, and shall coordinate with relevant MPOs when adjusting their 4-year target(s). Any adjustments made to 4-year target established for the CMAQ Traffic Congestion measure shall be agreed upon and made collectively by all State DOTs and MPOs that include any portion of the NHS in the respective urbanized area applicable to the measures.

In preparation for PM3's 2018 target-setting effort, coordination between the California Department of Transportation (Caltrans) and MPOs occurred via guidance from Technical Advisory Group (TAG) meetings, which included members from MPOs and Caltrans, in-person/webcast workshops in 2017 and 2018, and other key stakeholder meetings. Please see Table 1 for a comprehensive list of Caltrans' outreach efforts. The information provided by the MPOs via these workshops and meetings was used to collaboratively establish targets for four of the performance measures, and individual discussions were held with each MPO with an urbanized area over one million to establish single, unified targets for two of the performance measures, as noted in Table 2.

Table 1

Date	Meeting	Communication
6/14/17	Native American Advisory Committee Meeting	In-person (Woodland)
7/31/17	SACOG's Transportation Performance Measure Conversation Meeting	In-person (Sacramento) / Teleconference
8/3/17	Meeting with CALCOG - Lessons Learned from PM1's Year-One Process	Teleconference
8/31/17	Performance Management 2/3 Joint Workshop	In-person (Sacramento) / Webinar
11/15/17	Native American Advisory Committee Meeting	In-person (Woodland)
11/29/17	PM 3's Technical Advisory Group Meeting #1	Webinar
12/5/17	MPO / State Agency Senate Bill 375 Implementation Working Group	In-person (Sacramento) / Teleconference
12/18/17	PM3 Workshop	Los Angeles / Webinar
2/1/18	PM3's Technical Advisory Group Meeting #2	Webinar
2/22/18	PM3's MAP-21 Tool Training (Iteris, Inc)	Webinar
3/5/18	PM3's Technical Advisory Group Meeting #3	Webinar
3/13/18	PM 1/3's Joint Workshop	In-person (Berkeley) / Webinar
3/14/18	Native American Advisory Committee Meeting	In-person (Woodland)
3/27/18	California Federal Programming Group Meeting	In-person (Sacramento) / Teleconference
4/19/18	Technical Advisory Group Meeting #4	Teleconference
4/30/18	PM3's MAP-21 Data Comparison Meeting (SACOG / MTC)	In-person (Sacramento)
4/30/18	PM3's NPMRDS Tool Meeting	Email
5/2/18	PM3's Unified Target Meeting (MTC)	Teleconference
5/2/18	PM3's Unified Target Meeting (SCAG)	Teleconference
5/7/18	Caltrans Presented Draft Targets	Email
5/7/18	PM3's Unified Target Meeting (SANDAG)	Teleconference

5/8/18	California Federal Programming Group Meeting	Teleconference
5/9/18	PM3's Unified Target Meeting (SCAG)	Teleconference
5/10/18	PM3's Unified Target Meeting (SACOG)	Teleconference
5/10/18	Posted Speed Limits Data Update	Email
5/15/18	PHED Tool Update	Email
5/16/18	PM3's Unified Target Meeting (SANDAG)	Teleconference
5/20/18	Caltrans Presented Final Targets	Email
6/19/18	California Federal Programming Group Meeting	Teleconference
6/27/18	Native American Advisory Committee Meeting	In-person (Woodland)

The above outreach efforts included several innovative collaborative tools for establishing the initial targets. For instance, at the December 2017 Target Setting Workshop, held in Los Angeles, participants used an interactive text-based polling tool called “Poll Everywhere.” Workshop participants, both on-line and in-person, were given draft baseline numbers for each of the performance measures, and then given three target scenarios: 1) Setting targets above the existing baseline number; 2) Maintaining the existing baseline number; and 3) Setting targets below the existing baseline number. Next, the participants were provided a text number to vote on which target setting direction they supported. Finally, these results were used to prepare draft targets for future discussions with the Technical Advisor Group, Caltrans Management, and MPOs.

Another tool used for setting the initial targets was the “NPMRDS Analytics” web-based tool provided by Regional Integrated Transportation Information System (RITIS). Caltrans was provided access to this tool as a participant in a Transportation Performance Management Pooled- Fund Study. This tool was vital in establishing four of the six initial performance measure targets because it provided a simple, easy-to-use analysis of the National Performance Management Research Data (NPMRDS) data.

For example, the three reliability measures (Interstate, Non-Interstate NHS, and Freight) and the PHED measure all required use of the NPMRDS data. This NPMRDS data provided the baseline information for most of the performance measure calculations. However, to fully utilize the tool required posted speed limits for the applicable road networks. Once Caltrans’ staff provided the posted speed limits to RITIS, the tool was fully functional, and was used to establish statewide targets.

Final targets were ultimately established based on an iterative process and much coordination between Caltrans, MPOs, CALCOG, and the California State Transportation Agency.

Table 2

Performance Measure	2017 Baseline Data	2-year Target	4-year Target
Percent of Reliable Person-Miles Traveled on the Interstate ¹	64.6%	65.1% (+0.5%)	65.6% (+1%)
Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS1	73.0%	N/A	74.0% (+1%)
Percentage of Interstate System Mileage Providing Reliable Truck Travel Time (Truck Travel Time Reliability Index) ¹	1.69	1.68 (-0.01)	1.67 (-0.02)
Total Emissions Reductions by Applicable Pollutants under the CMAQ Program ²			
VOC (kg/day)	951.83	961.35 (+1%)	970.87 (+2%)
CO (kg/day)	6,863.26	6,931.90 (+1%)	7,000.54 (+2%)
NOx (kg/day)	1,753.36	1,770.89 (+1%)	1,788.43 (+2%)
PM10 (kg/day)	2,431.21	2,455.52 (+1%)	2,479.83 (+2%)
PM2.5 (kg/day)	904.25	913.29 (+1%)	922.34 (+2%)
*Annual Hours of Peak-Hour Excessive Delay Per Capital	State and MPO must coordinate on a single, unified 4-year target.		
Sacramento UA	14.9 Hours	N/A	14.7 (-1.0%)
San Francisco-Oakland UA	31.3 Hours	N/A	30.0 (-4.0%)
San Jose UA	27.5 Hours	N/A	26.4 (-4.0%)
Los Angeles-Long Beach-Anaheim UA	51.7 Hours	N/A	51.2 (-1.0%)
Riverside-San Bernardino UA	16.3 Hours	N/A	16.1 (-1.0%)
San Diego UA	18.4 Hours	N/A	18.0 (-2.0%)
*Percent of Non-Single Occupancy Vehicle (SOV) Travel ³	State and MPO must coordinate on a single, unified 2-year and 4-year target.		
Sacramento UA	22.8%	23.3% (+0.5%)	23.8% (+1%)
San Francisco-Oakland UA	44.3%	45.3% (+1%)	46.3% (+2%)
San Jose UA	24.5%	25.5% (+1%)	26.5% (+2%)
Los Angeles-Long Beach-Anaheim UA	25.6%	26.1% (+0.5%)	26.6% (+1%)
Riverside-San Bernardino UA	22.7%	23.2% (+0.5%)	23.7% (+1%)
San Diego UA	23.8%	24.8% (+1%)	25.2 (+1.4%)
Percent Change in Tailpipe CO ₂ Emissions on the NHS Compared to the Calendar Year 2017 Level (Greenhouse Gas performance measure) ⁴	TBD	TBD	TBD

¹ Source: NPMRDS Analytics Tool (<https://npmrds.ritis.org/analytics/>)

² Source: CMAQ Public Access System (https://fhwaapps.fhwa.dot.gov/cmaq_pub/)

³ Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

⁴ State must establish target no later than September 28, 2018