

# Safety Performance Measurement

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## Overview

A key feature of the Moving Ahead for Progress in 21st Century Act (MAP-21) is the creation of a performance and outcome-based program that uses data driven performance measures to achieve national goals. In the area of safety, the national goal is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The data-driven methodology will require both the California Department of Transportation (Caltrans) and the California Metropolitan Planning Organizations (MPOs) to work in conjunction to develop goals that will further safety improvements statewide.

## Notice of Proposed Rulemaking

The Federal Highway Administration (FHWA) issued a Notice of Proposed Rulemaking (NPRM) for the Highway Safety Improvement Program (HSIP) on March 11, 2014.<sup>1</sup> The comment period on the NPRM was extended to June 30, 2014, at which point Caltrans was able to send in their response to the rulemaking. As of July 2015, *a final rule is expected to be published in November 2015, which may differ from the NPRM.*

Additionally, a Federal Fiscal Year 2015 Omnibus Appropriations Bill directs the FHWA to establish separate safety performance measures for pedestrian and bicyclist fatalities and serious injuries.

## Summary of Performance Measure

The NPRM covers multiple areas for improvement, but the safety-related measures are generalized as follows:

1. Serious injuries per 100 million Vehicle Miles Traveled (VMT) on all public roads
2. Fatalities per 100 million VMT on all public roads
3. Number of serious injuries on all public roads
4. Number of fatalities on all public roads

## Performance Measure Calculation Detail

The NPRM states that the number of fatalities would be determined from the National Highway Traffic Safety Administration's (NHTSA)'s Fatality Analysis Reporting System (FARS), which receives California-specific data from the California Highway Patrol's (CHP) Statewide Integrated Traffic Records System (SWITRS). FARS contains SWITRS fatality data for all public roads, however it is Caltrans' understanding that there may be some California jurisdictions that do not enter data into SWITRS because of non-standard accident reporting forms.

The NPRM states that the number of serious injuries is to be determined by "State reported data", and that the serious injury performance measure will ultimately need to conform to the Model Minimum Uniform Crash Criteria (MMUC). Serious injury data is also collected through CHP's SWITRS program; The California Office of Traffic Safety (OTS), within the California State Transportation Agency (CalSTA), is working with the U.S. Department of Transportation Traffic Records Coordinating Committee to determine if SWITRS is MMUC compliant.

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<sup>1</sup> National Performance Management Measures; Highway Safety Improvement Program, 79 Fed. Reg. 13846 (Mar. 11, 2014). <https://www.federalregister.gov/articles/2014/03/11/2014-05152/national-performance-management-measures-highway-safety-improvement-program>

Rate performance measures (i.e., fatalities and serious injuries per 100 million VMT) would be measured as reported by Caltrans to the FHWA Highway Performance Monitoring System (HPMS). Caltrans Division of Research Innovation and System Information (DRISI) currently submits travel volume data for both the State Highway System (through the Traffic Census program) and non-state roads to HPMS. DRISI collects this traffic volume data under contract and also receives data from some local agencies; however, there are significant discrepancies and gaps with regard to the traffic volume data Caltrans currently collects and reports – particularly with regard to local roads.

Each performance measure is based on a 5-year rolling average, rounding the total to the hundredth decimal place.

## Establishing Performance Targets

The NPRM encourages state Departments of Transportation (state DOTs), including Caltrans, to set performance targets that represent improvements in both the number and rate of fatalities and serious injuries. Targets will represent statewide performance, but separate targets may also be set for urban and rural areas (historically, Caltrans Traffic Census has established boundaries between rural and urban areas).

State DOTs must set safety performance targets for the following year in their annual HSIP report to FHWA (and they must also be included in the statewide transportation improvement program under 23 USC § 135(g)(4)). State DOT HSIP performance targets must be identical with State Highway Safety Office (in California, the OTS) targets reported annually to NHTSA in the State Highway Safety Plan, and as coordinated through the State Strategic Highway Safety Plan.

MPOs shall establish their own targets no later than 180 days after the Caltrans HSIP annual report. MPO targets will be reported to State DOTs and made available to FHWA upon request. Additionally, performance targets should be included in both metropolitan transportation plans (23 USC § 134 (i)(2)(B)) and transportation improvement programs (23 USC § 134(j)(2)(D)). Metropolitan transportation plans must include a description of the performance measures and targets used in assessing transportation system performance, while the transportation improvement program must describe the effect of achieving performance targets and link investment priorities to those targets.

State DOTs and MPOs are required to coordinate target setting to the maximum extent practicable.<sup>2</sup>

## Timelines

The FHWA requires Caltrans to establish statewide targets not later than one year after the effective date of the final rule, and begin reporting this target information in the HSIP annual report due August 31 following the effective date of the final rule.

## Accountability Measures

If a State has not met or made significant progress toward meeting its targets within two years of their establishment, the State must use an amount of its formula obligation limitation equal to its prior year HSIP apportionment only for obligation of its HSIP funding. Additionally, the State must submit an annual implementation plan on how the State will make progress to meet performance targets (23 USC § 148(i)).

Special Rules:

- *High Risk Rural Road (HRRR) Safety* – An HRRR is any rural major or minor collector or a rural local road with significant safety risks, as defined by a state in accordance with an updated State Strategic Highway Safety Plan. If the fatality rate on such roads increases over the most recent 2-year period for which data are available, in the

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<sup>2</sup>The NPRM anticipates that MPOs serving populations less than 200,000 will likely adopt State DOT targets rather than establish their own safety performance targets.

next fiscal year the state must obligate for this purpose an amount at least equal to 200 percent of its FY 2009 HRRR set-aside.<sup>3</sup>

- *Older drivers* – If fatalities and serious injuries per capita for drivers and pedestrians over age 65 increases during the most recent 2-year period for which data are available, a state is required to incorporate strategies focused on older drivers and pedestrians in the next State Strategic Highway Safety Plan update.

## Caltrans comments on this NPRM

Caltrans submitted several comments on the NPRM after soliciting stakeholder feedback. First, Caltrans notes that that the fatality and serious injury performance measure data will likely be derived from CHP SWITRS. However, incident information from SWITRS is not always immediately accurate and must be vetted; and there is a time gap between the date of the incident and the date when the SWITRS information is available for research. Efforts are being made to improve the timeliness and quality of SWITRS data, but it currently affects our ability to establish meaningful performance targets.

Additionally, Caltrans notes that the FHWA definition of serious injuries may be different than the standard used in California. If it is, hundreds of police, sheriff, and CHP offices may need to retrain their staff to adhere to the new definition, which would be both time consuming and costly. Additionally, it would impact the ability to compare historical data to new information collected.

The NPRM also recommends that by 2020, states determine serious injuries using a hospital records injury outcome reporting system. It may be difficult for Caltrans to establish a link between the hospital data systems and our own system by that time.

Finally, approximately 90 percent of California's public roads are on the local roadway system, and only 10 percent are on the State Highway System. More than half of California's roadway fatalities (60 percent) occur on the local roadway system, where information such as roadway features, traffic volumes, and road miles – needed to accurately calculate fatality and serious injury rates - are not always available. Caltrans will need to coordinate closely with local agencies to collect and accurately report this data, which will take time and require financial resources.

## Additional Resources

Caltrans MAP-21 Implementation Website:

[http://www.dot.ca.gov/hq/transprog/map21\\_Implementation.htm](http://www.dot.ca.gov/hq/transprog/map21_Implementation.htm)

FHWA Transportation Performance Management Website:

<http://www.fhwa.dot.gov/tpm/>

FHWA MAP-21 Fact Sheet on Performance Management:

<http://www.fhwa.dot.gov/map21/factsheets/pm.cfm>

FHWA MAP-21 Fact Sheet on Highway Safety Improvement Program:

<http://www.fhwa.dot.gov/map21/factsheets/hsip.cfm>

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<sup>3</sup> The HRRR program was a Federal statutory funding set-aside that existed prior to MAP-21.