



# An overview of safety performance requirements for the Moving Ahead for Progress in the 21st Century Act

In March 2014, the U.S. Department of Transportation published two interrelated traffic safety-oriented Notices of Proposed Rule Making (NPRMs) in the Federal Register, commonly referred to as the Safety Performance Measures NPRM and the Highway Safety Improvement Program NPRM. Both draft rules relate to highway safety with the primary goal of significantly reducing crashes resulting in fatalities and serious injuries on all public roads. The Safety Performance NPRM will be the focus of this folio.

## Target setting and “significant progress”

- At a minimum, statewide targets on all public roads must be set for every required performance measure; additionally, states can establish optional measures for target setting purposes (see box at right for required and optional measures).
- Two years after states set targets, and annually thereafter, FHWA will assess target achievement.
- The state must meet or exceed 50 percent of the established targets. (Optional targets are included for penalty purposes.)
- Meeting or exceeding targets is identified by showing “**significant progress**” - each required target’s outcome is at or below the **70 percent upper prediction limit**, which is expected to be set based on the projection calculated from 10 years of historical data.
- Metropolitan Planning Organizations (MPOs) have the option of setting their own respective targets or aligning with WSDOT targets.

## Safety Performance Reporting

The Safety Performance NPRM’s Section 490.213 proposes safety performance reporting for state DOTs and MPOs. State DOTs would establish and report their safety targets and progress toward these targets in an annual Highway Safety Improvement Program (HSIP) report in accordance with Code of Federal Regulation (CFR) 23 Part 924. Targets established by an MPO would be reported to their state DOT on an annual basis, in a manner that is agreed upon by both parties in a Metropolitan Planning Agreement developed under CFR 24 Part 450. MPOs would report safety performance and progress in the Metropolitan Transportation Plan as provided in U. S Code 23 Section 134(i)(2)(C).

## Summary of required performance measures

Federal Highway Administration (FHWA) draft rules for Moving Ahead for Progress in the 21st Century Act (MAP-21) require all states to report on the following safety performance measures:

- Number of fatalities on all public roads
- Number of fatalities per 100 million Vehicle Miles Traveled (VMT) on all public roads
- Number of serious injuries on all public roads
- Number of serious injuries per 100 million VMT on all public roads

**Optional measures:** In addition to these MAP-21 requirements, the proposed safety rules also allow optional measures to ascertain progress in urbanized and non-urbanized areas. If optional measures are used, eight would be added (four each for an urbanized subset and non-urbanized subset) for a total of 12 performance measures. If optional measures are chosen, targets must be set, and DOTs can be assessed penalties if they do not show progress.

- Bicyclist/Pedestrian fatalities and serious injuries on all public roads

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. Once the safety performance rules become final, states can expect more specific information.

**Special rules:** The following are MAP-21 special rules that are reported at the statewide level to FHWA:

- Fatality and serious injury data for drivers and pedestrians age 65 and older on all public roads
- Fatality rate for High Risk Rural Roads
- Number of fatalities on railway-highway crossings

## About these graphs

These graphs represent Washington state target setting data for the four required Safety NPRM Performance measures.

The general prescribed MAP-21 process for generating trend and target information is as follows:

1) a) The annual number of fatalities and serious injuries is determined for a 10 year period (one extra data year was provided for Target Setting: fatalities and Target Setting: serious injuries). b) For fatality and serious injury rate graphs, Vehicle Miles Traveled (VMT) information is likewise captured for a 10 year period.

2) A 5-year rolling average trend line is developed for each graph based on individual rolling timelines, i.e., 2004-2008 creates one 5-year rolling average; 2005-2009 creates the next 5-year rolling average, etc.

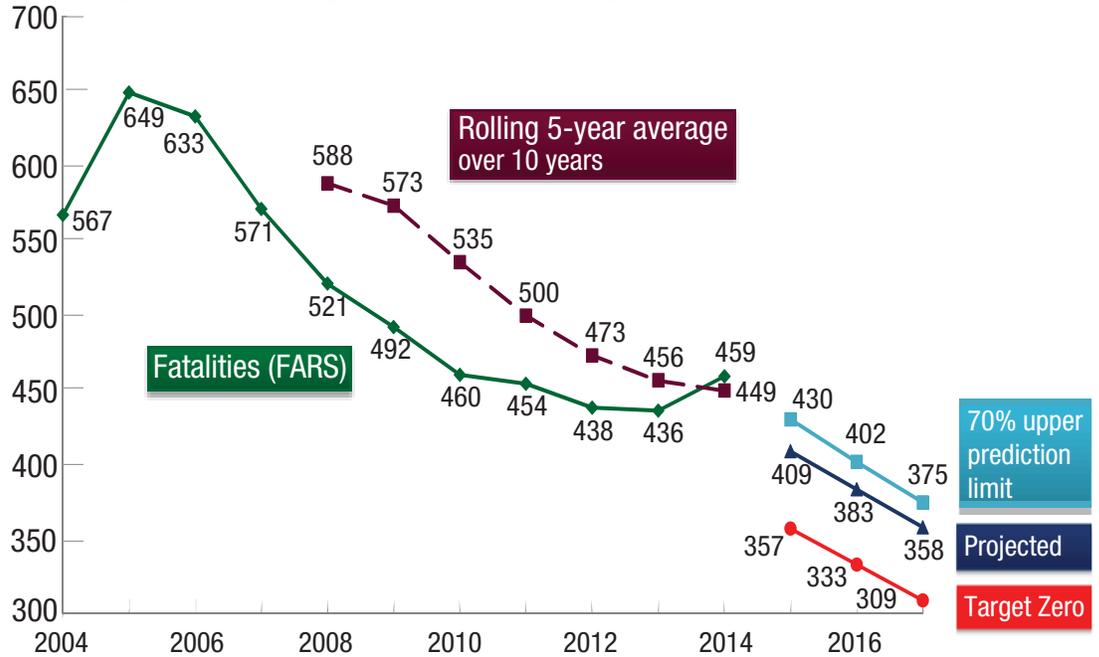
3) Based on the 5-year rolling average trend line over the course of 10 years, an extension of that trend, referred to as the "projected line," is developed.

4) Upper and lower prediction limit thresholds for the future are calculated based on the projected line (only the upper limit threshold is shown). MAP-21 prescribes a 70% upper limit, meaning the upper limit for acceptable allowance – significant progress toward targets must be achieved at or below the 70% prediction limit.

5) Target setting for Washington state will require further dialog between involved partners.

## Target setting: fatalities

Calendar years 2004 through 2017; actual and projected numbers

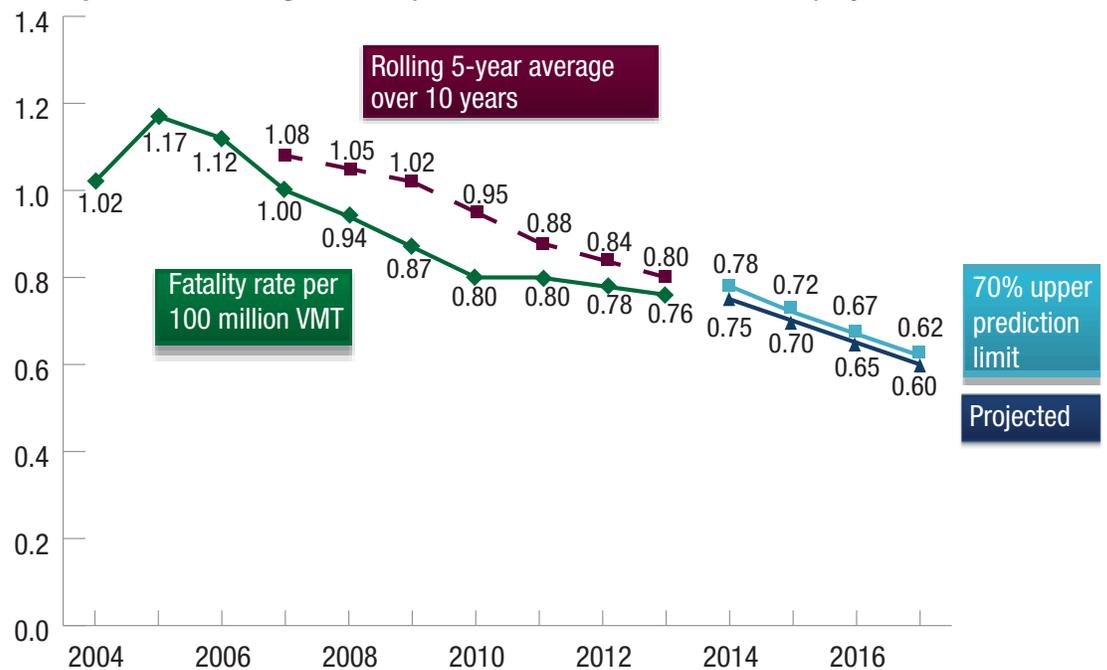


Data source: Washington State Traffic Safety Commission, Fatality Analysis Reporting System (FARS).

Notes: Fatality data for 2014 is preliminary. The MAP-21 prescribed "70% upper prediction limit" and the "projected" lines are based on the historic, continuous or rolling 5-year average trend. The "Target Zero" line represents Washington's current projection to achieve zero fatalities by 2030.

## Target setting: fatality rates

Fatality rate in Washington state per 100 million VMT; actual and projected numbers



Data source: Washington State Traffic Safety Commission, Fatality Analysis Reporting System (FARS) and WSDOT Highway Performance Monitoring System (HPMS).

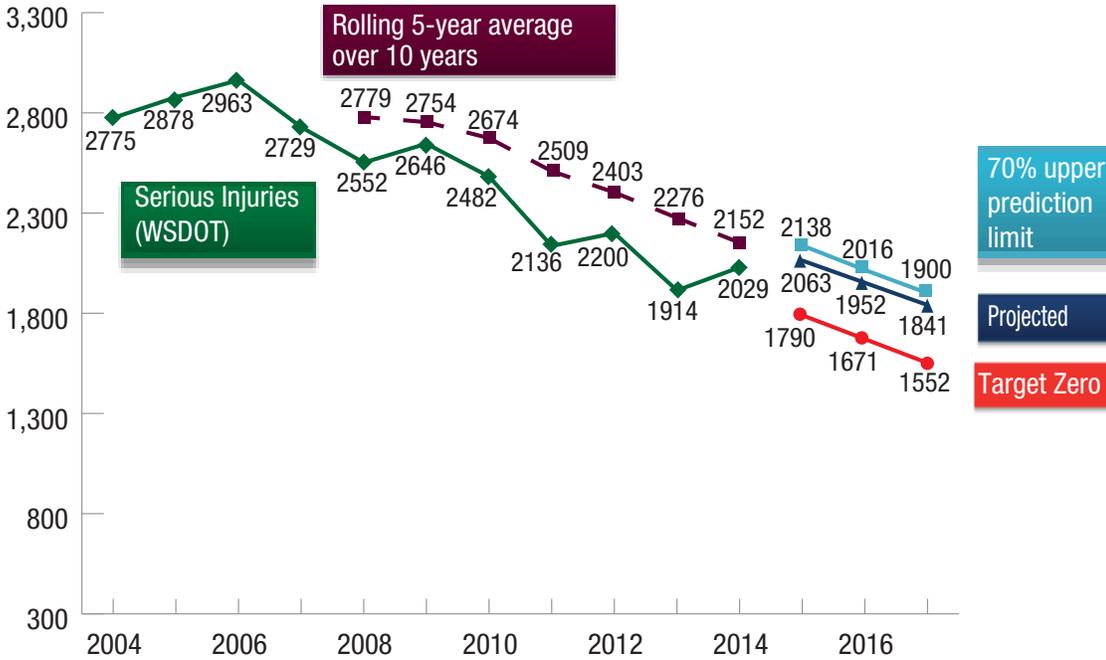
Notes: Fatality data for 2014 is preliminary. The MAP-21 prescribed "70% upper prediction limit" and the "projected" lines are based on the historic, continuous or rolling 5-year average trend.





## Target setting: serious injuries

Calendar years 2004 through 2017; actual and projected numbers

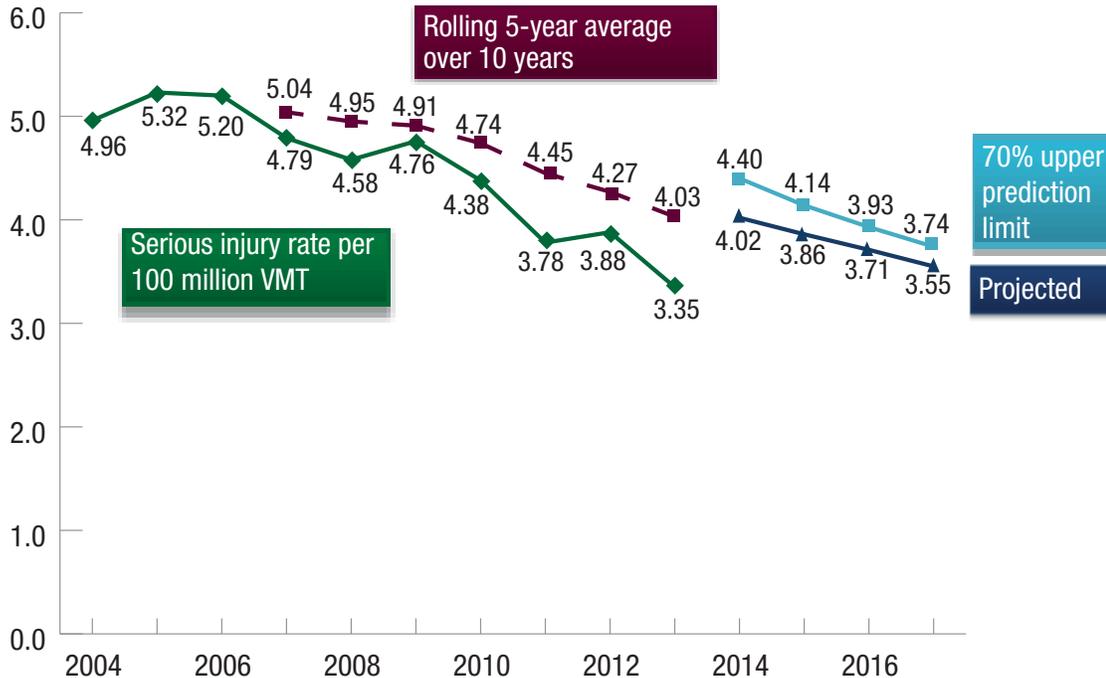


Data source: WSDOT - crash database.

Notes: Fatality data for 2014 is preliminary. The MAP-21 prescribed "70% upper prediction limit" and the "projected" lines are based on the historic, continuous or rolling 5-year average trend. The "Target Zero" line represents Washington's current projection to achieve zero fatalities by 2030.

## Target setting: serious injury rates

Serious injury rate in Washington state per 100 million VMT; actual and projected numbers



Data source: WSDOT crash database and Highway Performance Monitoring System (HPMS).

Notes: Fatality data for 2014 is preliminary. The MAP-21 prescribed "70% upper prediction limit" and the "projected" lines are based on the historic, continuous or rolling 5-year average trend.

## Data collection

- MAP-21 requires fatality data from the Washington State Traffic Safety Commission's (WTSC) Fatality Analysis Reporting System (FARS) and serious injury data from WSDOT's system.
- State law enforcement officers record crash events in The Washington State Police Traffic Collision Report. This report is the sole source for all WSDOT serious injury data and most FARS data, with few exceptions.
- MAP-21 requires Vehicle Miles Traveled (VMT) data from WSDOT's Highway Performance Monitoring System. Along with the number of fatalities or serious injuries, VMT is used to calculate the rate of fatalities or serious injuries per 100 million VMT.
- WSDOT's serious injury data and FARS fatality data for the previous calendar year is preliminarily available in about February and April of the following year, respectively. WSDOT's VMT data is available about June of the following calendar year.

## Penalties

As described in U.S. Code 23 Section 148(i), for the Safety Performance NPRM, if the U.S. Department of Transportation (U.S. DOT) Secretary determines a state has not met or made significant progress toward achieving its safety performance targets (including those for optional measures) by the date that is two years after the establishment of its targets, the state would:

- dedicate its obligation authority equal to the apportionment for HSIP to the state for the prior year to highway safety improvement projects until the U.S. DOT Secretary determines that the state has made significant progress or met the targets; and
- annually submit to U.S. DOT a safety implementation plan until the U.S. DOT Secretary determines that the state has made significant progress or met the targets.

### What is the current distribution of funds?

**Safety:** The Local Federal Safety Program provides more than \$20 million annually of federal Highway Safety Improvement Program (HSIP) funds to jurisdictions in Washington state. The funds are used to implement engineering countermeasures to reduce fatal and serious injury crashes. Federal funding provided to the state is split based upon fatal and serious injury crash data which reflects 30 percent on state facilities and 70 percent on local facilities. WSDOT prioritizes and selects local safety projects for funding based on crash data and benefit-cost analysis.

## For more information

**Traffic crash fatal and serious injury data:** Mike Bernard at (360) 570-2454, [BernarM@wsdot.wa.gov](mailto:BernarM@wsdot.wa.gov). Data is protected by U.S. Code 23 Section 409, but can be requested.

**MAP-21 safety requirements information:** John Milton, Director of Quality Assurance and Transportation System Safety, at (360) 704-6363 or [Milton.J@wsdot.wa.gov](mailto:Milton.J@wsdot.wa.gov).

## Available Data

- Number of traffic fatalities for all public roads
- Rate of traffic fatalities per 100 million Vehicle Miles Traveled (VMT) for all public roads
- Number of serious traffic injuries for all public roads
- Rate of serious traffic injuries per 100 million VMT for all public roads
- Bicyclist/Pedestrian fatalities and serious injuries for all public roads<sup>1</sup>
- Fatality and serious injury data for drivers and pedestrians age 65 and older<sup>2</sup>
- Rate of traffic fatalities for all High Risk Rural Roads (HRRR)<sup>2,3</sup>
- Number of fatalities for railway-highway crossings

Notes: Crash data is available for all Washington public roads and can be provided by Metropolitan Planning Organization (MPO) boundaries. WSDOT will work with the Washington Traffic Safety Commission to obtain the requested fatality data. 1 This data is required as part of the Fiscal Year 2015 Omnibus Appropriations Bill, (not MAP-21) and is still under consideration by FHWA. 2 This data satisfies a MAP-21 special rule reported at the statewide level to FHWA, that may be of interest to MPOs. 3 The Federal Highway Administration (FHWA) uses FARS and Highway Performance Monitoring System (HPMS) data to calculate the fatality rate on high risk rural roads.

## Purpose of reporting requirements

In July 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) became law. Included in the law was a Declaration of Policy: "Performance management will transform the Federal-aid highway program and provide a means to the most efficient investment of Federal transportation funds . . ."

The primary objectives of MAP-21 are to increase the transparency and accountability of states for their investment of federal taxpayer dollars into transportation infrastructure and services nationwide, and to ensure that states invest money in transportation projects that collectively make progress toward the achievement of national goals. The new rules will require reporting performance on the following areas: Safety; Pavement and Bridge; System Performance/Congestion; Freight, and Congestion Mitigation and Air Quality (CMAQ).

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