

Safety Performance Management Targets for 2022

The California Department of Transportation (Caltrans), in cooperation with the Office of Traffic Safety (OTS), is required to set five annual Safety Performance Management Targets (SPMTs) for all public roads in the State of California by August 31 of each year. This is pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21, P.L. 112-141). The Safety Performance Management Final Rule adds Part 490 to Title 23 of the Code of Federal Regulations to implement the performance management requirements in 23 U.S.C. 150.

Caltrans set SPMTs for the 2022 calendar year by August 31, 2021. Caltrans and OTS have adopted the following performance measures shown in Table 1.

Performance Measure	Data Source	5-Yr. Rolling Average Target for 2022	Annual Percentage Change for 2022
Number of Fatalities	FARS	3,491.8	-3.61%
Rate of Fatalities (per 100M VMT)	FARS & HPMS	1.042	-2.00%
Number of Serious Injuries	SWITRS	16,704.2	1.66%
Rate of Serious Injuries (per 100M VMT)	SWITRS & HPMS	4.879	1.66%
Number of Non-Motorized Fatalities and Non-Motorized Severe Injuries	FARS & SWITRS	4,684.4	-3.61% for Fatalities and 1.66% for Serious Injuries

Note: The targets highlighted in gray are set in coordination with OTS.

TABLE 1. PERFORMANCE MEASURE AND TARGET BASED ON 5-YEAR ROLLING AVERAGE

Federal Guidance and Requirements

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads and focuses on performance. The HSIP regulation under 23 CFR 924 establishes the Federal Highway Administration’s (FHWA) HSIP policy, as well as program structure, planning, implementation, evaluation and reporting requirements for States to successfully administer the HSIP.

In support of a data-driven and strategic approach, the HSIP Final Rule contains major policy changes related to:

- (1) the state Strategic Highway Safety Plan (SHSP) update cycle,
- (2) the state annual HSIP report content and schedule, and
- (3) the subset of the Model Inventory of Roadway Elements (MIRE) fundamental data elements (FDE).

The Safety Performance Management (PM) Final Rule supports the data-driven performance focus of the HSIP. The Safety PM Final Rule establishes five performance measures as five-year rolling averages to carry out the HSIP. The performance measures include:

- (1) Number of Fatalities,
- (2) Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT),
- (3) Number of Serious Injuries,
- (4) Rate of Serious Injuries per 100 million VMT, and
- (5) Number of Non-motorized Fatalities and Non-motorized Serious Injuries.

These safety performance measures are applicable to all public roads regardless of ownership or functional classification. The Safety PM Final Rule also establishes a common national definition for serious injuries.

California Safety Planning and Target Setting

The overarching highway safety plan for the State of California is the Strategic Highway Safety Plan (SHSP). In January 2020, California updated its SHSP, which is a statewide, coordinated traffic safety plan that provides a comprehensive framework for reducing roadway fatalities and serious injuries on California's public roads. The SHSP is a multi-disciplinary effort involving Federal, tribal, State, and local representatives from the 5Es who dedicate countless hours to improve safety and partnerships across disciplines where the 5Es represent education, enforcement, engineering, emergency response, and emerging technologies.

States must establish statewide targets for each of the federal safety performance measures. States also have the option to establish any number of urbanized area targets and one non-urbanized area target for any, or all, of the measures. Targets are established annually. For three performance measures (number of fatalities, rate of fatalities, and number of serious injuries), targets must be identical to the targets established for the National Highway Traffic Safety Administration (NHTSA) Highway Safety Grants program that is administered by OTS. The State Departments of Transportation (DOTs) must also coordinate with their Metropolitan Planning Organizations (MPOs) in their States on establishment of targets, to the maximum extent practicable. States will report targets to the FHWA in the HSIP report due in August of each year.

Each MPO will establish targets for the same five safety performance measures for all public roads in the MPO's planning area within 180 days after the State establishes each target. The targets will be established in coordination with the State, to the maximum extent practicable. The MPO can either agree to support the State DOT target or establish a numerical target specific to the MPO planning area. MPOs' targets are reported to the State DOT, which must be able to provide the targets to FHWA, upon request.

A State is considered to have met, or made significant progress toward meeting, its safety targets when at least four of the five targets are met or the outcome for the performance measure is better than the baseline performance the year prior to the target being set. Optional urbanized area or non-urbanized area targets will not be evaluated. Each year that FHWA determines a State has not met or made significant progress toward meeting its performance targets, the State will be required to use obligation authority equal to the baseline year HSIP apportionment for safety projects. States must also develop a HSIP Implementation Plan.

Target Selection Methodology

There are three steps to setting safety performance targets, which are:

- (1) estimating the existing trend to determine where the State is,
- (2) determining what external factors will impact the target in order to adjust the trend for demographic and socioeconomic changes, and
- (3) estimating targets based on forecasted fatality reductions from safety plans.

Since SPMTs are applicable to all public roads in California, regional and local jurisdictions should be notified of the safety target setting process. On July 27, 2021, a virtual workshop was held to discuss the SPMTs with the MPOs and other vested stakeholders. During this workshop two possible scenarios for setting the 2022 SPMTs were presented. They included: (1) a trend line, which extrapolates the existing changes in fatalities and serious injuries into the future; and (2) a target based on estimated impacts from completed activities and projects.

The current approach is the first scenario that uses a trend line, which extrapolates the existing changes in fatalities and serious injuries into the future and is a data-driven process that estimates the impacts of external factors and safety improvements based on collision history.

Statewide Number of Fatalities

For 2022, the target for fatalities is the five-year rolling average of **3,491.8** with 3,229 fatalities projected for the same year. NHTSA Fatality Analysis Reporting System (FARS) data was used from 2010 through 2019. Traffic fatalities generally increased from 2010 to 2017 in California as shown in Figure 1, but there was a 2.20% reduction in fatalities from 3,884 in 2017 to 3,798 in 2018 and a 5.00% reduction from 2018 to 3,606 in 2019. To continue this downward trend line for fatalities, the average reduction of 3.61% from 2017 to 2019 was used to forecast data for 2020 through 2022. In Figure 1, the green bars reflect the data that was available in FARS at the time of the target setting process and the gray bars reflect the projected annual decrease of 3.61%. The dark green line represents the 5-year rolling average of the annual fatality numbers.

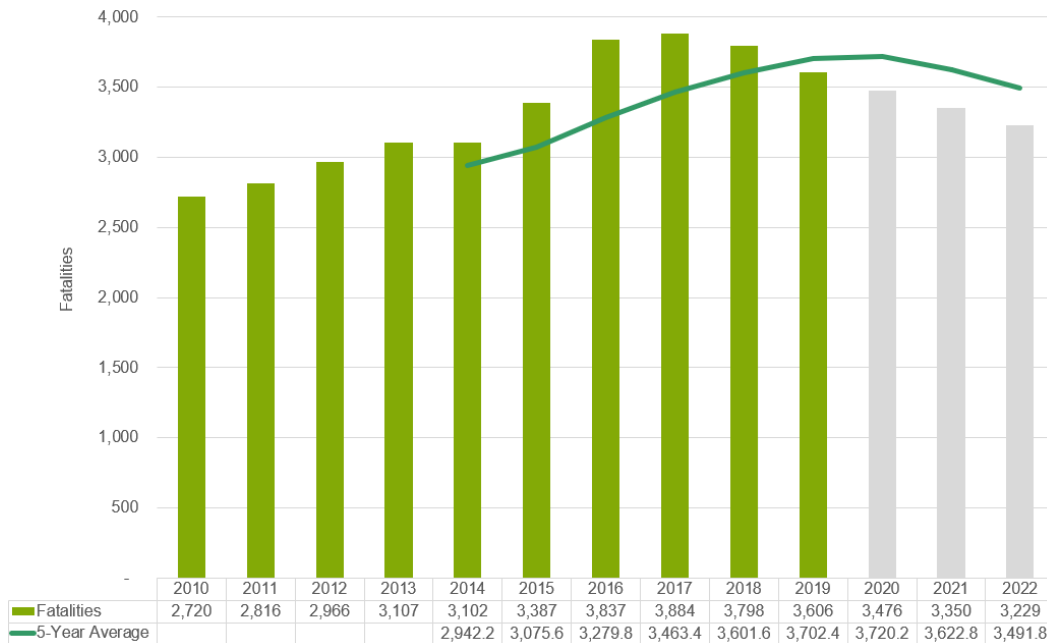


FIGURE 1 – STATEWIDE NUMBER OF FATALITIES

Through assistance with the HSIP, many California agencies have or are developing Local Roadway Safety Plans that put a focus on reducing fatal and serious injury collisions throughout their respective jurisdictions. This coupled along with an increase in the number of OTS grants from the prior year will assist California in continuing this downward trend in fatalities.

Statewide Number of Serious Injuries

For 2022, the target for serious injuries is the five-year rolling average of **16,704.2** with 17,259 serious injuries projected for the same year. Statewide Integrated Traffic Records System (SWITRS) data was available for serious injuries from 2010 through 2018. Preliminary data for 2019 was used since final data was not available at the time of 2022 target setting. The definition of serious injuries was changed to include suspected serious injuries and was implemented in mid-2017. The first full year of suspected serious injuries resulted in a significant increase from the last full year using the old definition. The trend line for serious injuries was based on the data from 2018 to 2019 with an annual increase of 1.66%, and the annual increase was used to forecast data for

2020 through 2022 to determine the five-year average. In Figure 2, the green bars reflect the data from SWITRS and the gray bars reflect the projected annual increase. The dark green line represents the 5-year rolling average of the annual serious injury numbers.

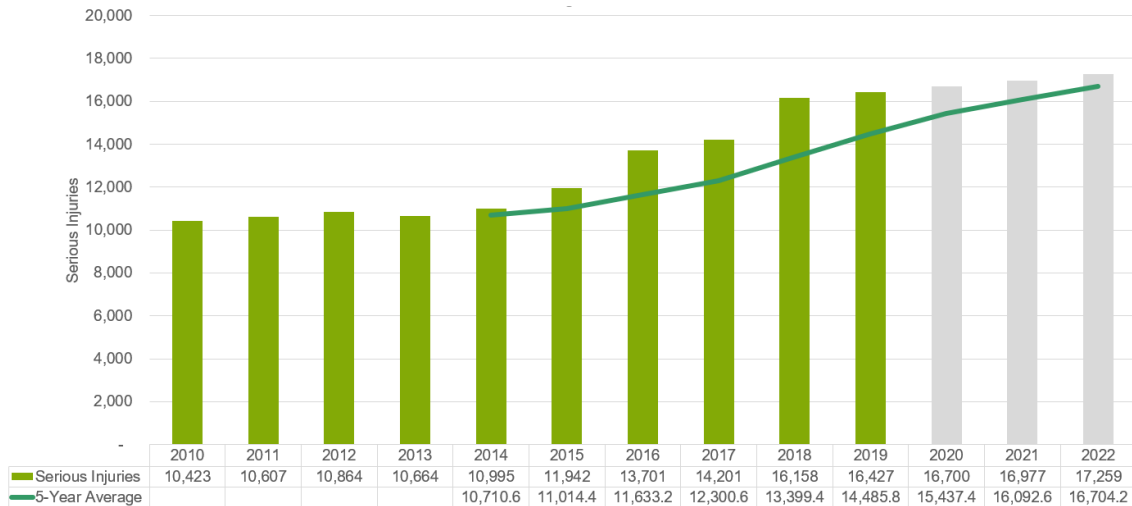


FIGURE 2 – STATEWIDE NUMBER OF SERIOUS INJURIES

Through assistance with the HSIP, many California agencies have or are developing Local Roadway Safety Plans that put a focus on reducing fatalities and serious injuries throughout their jurisdictions. This coupled with an increase in the number of OTS grants from the prior year will assist California in reversing the upward trend in serious injuries.

Statewide Traffic Volumes

Statewide traffic volumes are reported in one hundred million vehicle miles traveled (100M VMT). VMT data from the Highway Performance Monitoring System was used through 2018 as VMT data for 2019 was not available at the time of 2022 target setting. In Figure 3, traffic volumes have been steadily increasing since 2011. The 2019 VMT was projected to increase 0.9 percent over 2018 and then remain flat through 2022 due to the uncertainties of the pandemic.

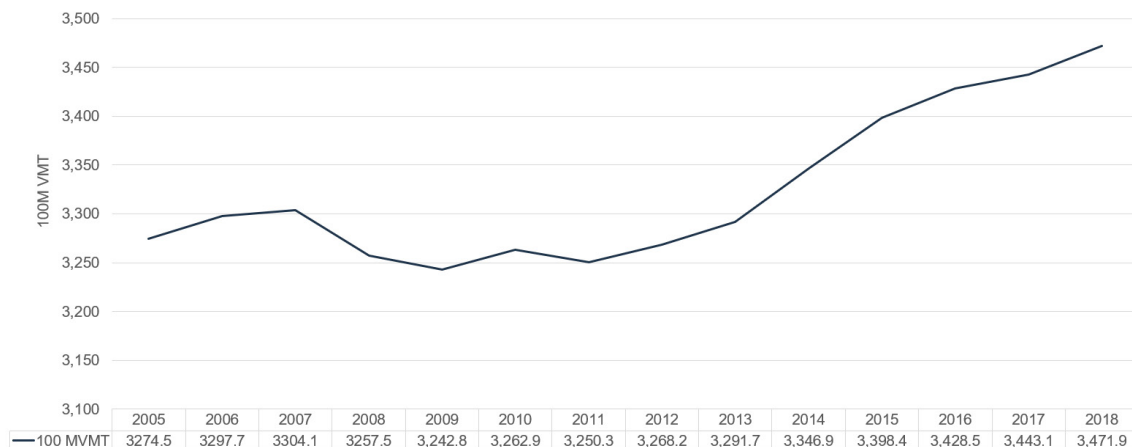


FIGURE 3 –STATEWIDE TRAFFIC VOLUMES

Statewide Fatality Rate

For 2022, the target for the fatality rate is the five-year rolling average of **1.042** with an annual rate of 1.00 projected for the same year. The trend line for the fatality rate is based on the average annual reduction from 2016 through 2019. The fatality rate did not change between 2016 and 2017, a 3.37% reduction between 2017 and 2018, and a 2.83% reduction between 2018 and 2019, so the calculated average reduction for the fatality rate is 2.01%. To continue this downward trend line for the fatality rate, the reduction was used to forecast data for 2020 through 2022. In Figure 4, the green bars reflect the available data for the annual fatality rates and the gray bars reflect the trend line reduction. The dark green line represents the 5-year rolling average of the annual fatality rates.

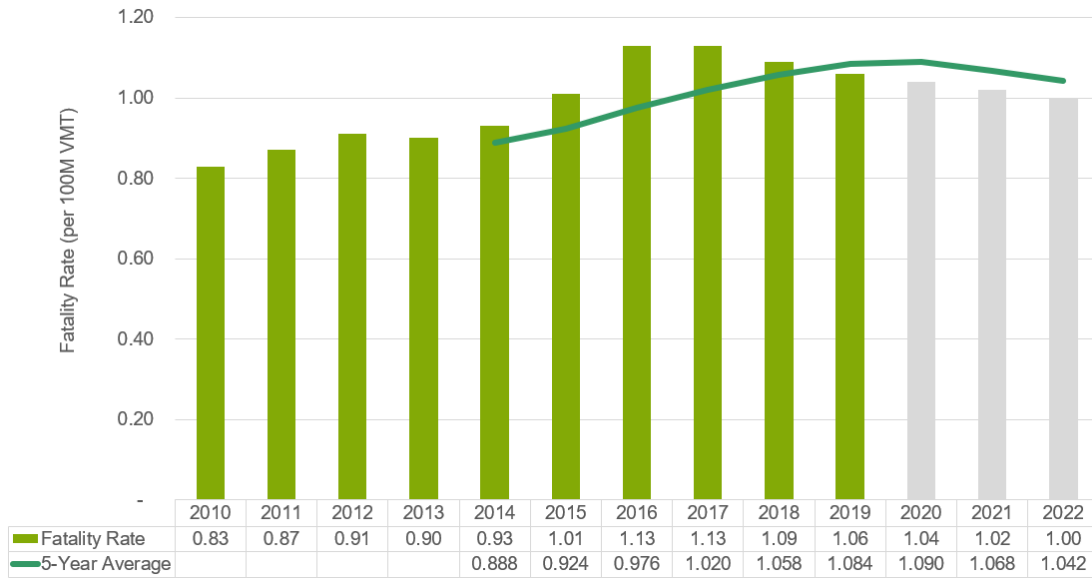


FIGURE 4 – STATEWIDE FATALITY RATE (PER 100M VMT)

Statewide Serious Injury Rate

For 2022, the target for the serious injury rate is the five-year rolling average of **4.879** with an annual rate of 5.06 projected for the same year. The serious injury rate was projected by 1.66% from 2020 through 2022. In Figure 5, the green bars reflect the available data for the annual serious injury rates and the gray bars reflect the trend line projection. The dark green line represents the 5-year rolling average of the annual serious injury rates.

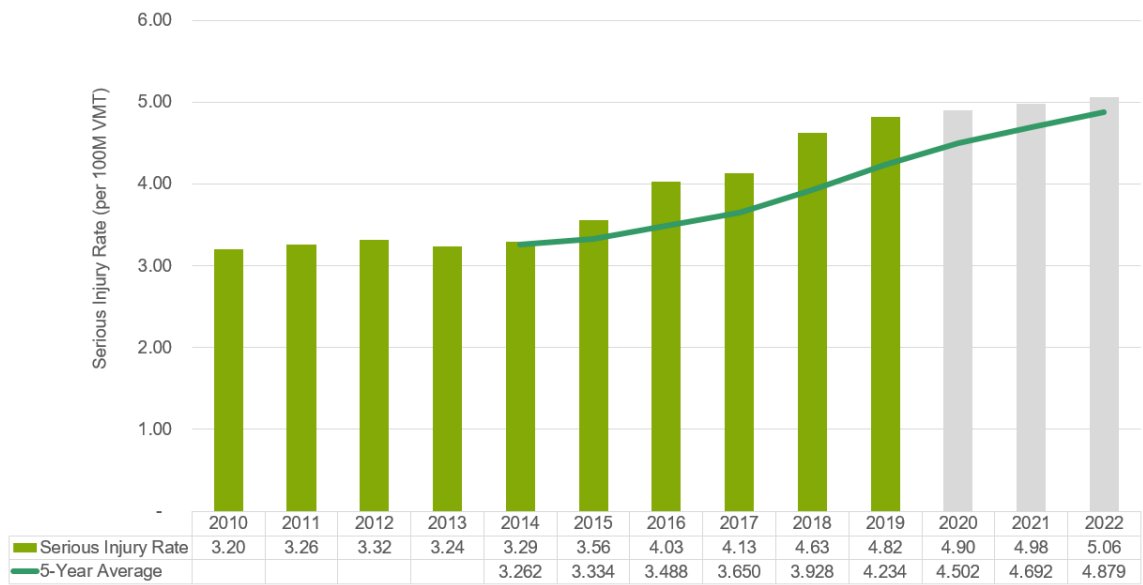


FIGURE 5 – STATEWIDE SERIOUS INJURY RATE (PER 100M VMT)

Statewide Non-Motorized Fatalities and Non-Motorized Serious Injuries (Pedestrians and Bicyclists)

For 2022, the target for non-motorized fatalities and serious injuries is the five-year average of **4,684.4** with an annual frequency of 4,740 for the same year. In Figure 6, the green bars reflect the number of fatalities from FARS and serious injuries from SWITRS for pedestrians and bicyclists combined. The gray bars reflect the annual 3.61% decrease in fatalities and annual 1.66% increase in serious injuries as previously discussed.

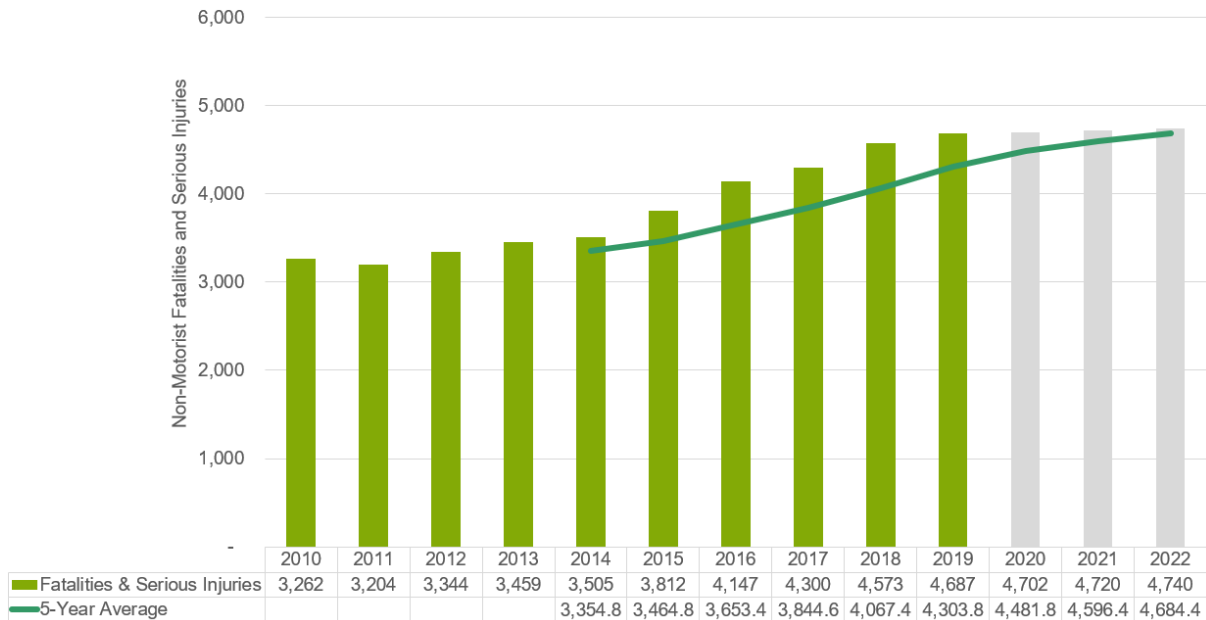


FIGURE 6 – STATEWIDE NON-MOTORIZED FATALITIES AND SERIOUS INJURIES (COMBINED)

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