

NYS SAFETY TARGET SETTING METHODS – 2022 TARGETS

NYS Department of Transportation, Office of Traffic Safety

Overview

As per the Highway Safety Improvement Program final rule (23 CFR Part 490); States are required to set targets for five safety performance measures.

The measures are the 5-year rolling averages for:

1. Number of Fatalities*
2. Rate of Fatalities (Fatalities / 100M VMT) *
3. Number of Serious Injuries*
4. Rate of Serious Injuries (Serious Injuries / 100M VMT)
5. Number of Non-motorized Fatalities and Non-motorized Serious Injuries

** Must be identical to the National Highway Traffic Safety Administration's Highway Safety Plan targets set annually by the Governors Traffic Safety Committee (GTSC).*

MPO Requirements

MPOs establish safety targets by either:

- Agreeing to plan and program projects that contribute toward the accomplishment of the State DOT target or
- Committing to a quantifiable safety target for the metropolitan planning area.

Timeline

- GTSC reports targets in the annual HSP on July 1 each year.
- NYSDOT establishes safety targets in the HSIP annual report on August 31, 2021.
- MPOs must agree to support state targets or establish their own within 180 days of the State establishing and reporting its safety targets. The MPO targets are due February 28, 2022.

NYSDOT's Target Setting Framework

1. Estimate existing trend
 - A linear trendline is used as the forecasting method. It is a clear, straightforward method recommended by FHWA.
 - The five-year moving average (current year plus four preceding years) is used as the data point for each year.
2. Adjust forecast for reasonability
3. Adjust forecast based on external and other factors where necessary

Step 1: Estimate existing trend

- Forecast 2022 using a 5-yr moving average linear trendline.
- Calculate a % change for 2018-2022 vs. 2015-2019.

Step 2: Adjust for reasonability

- Round the % change between 2018-2022 vs. 2015-2019.
- Apply a 1% cap.
The cap allows for a target that forecasts a significant reduction but recognizes that large decreases are difficult to sustain year after year.

Step 3: Adjust trend for external and other factors

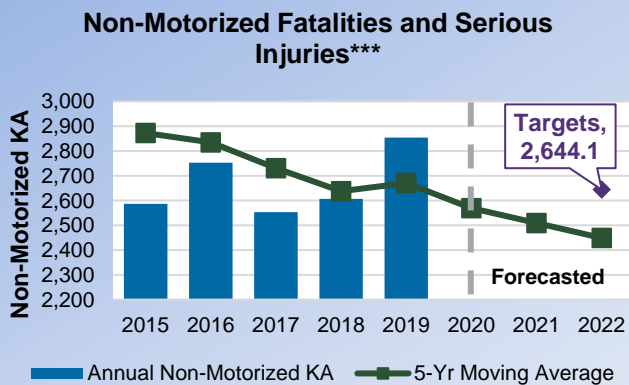
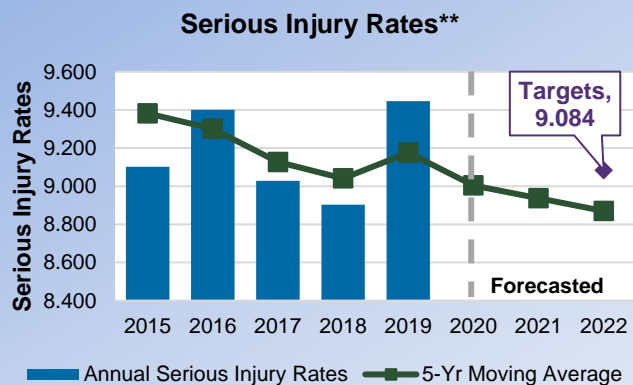
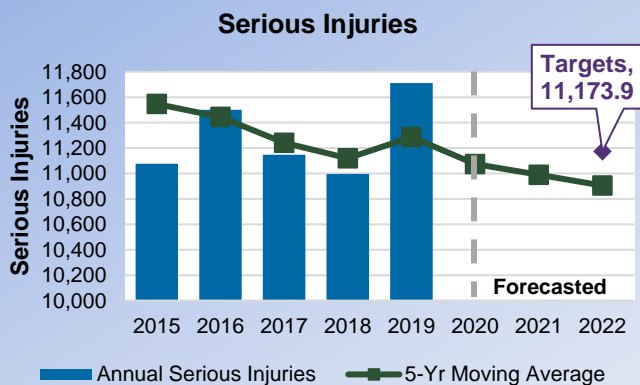
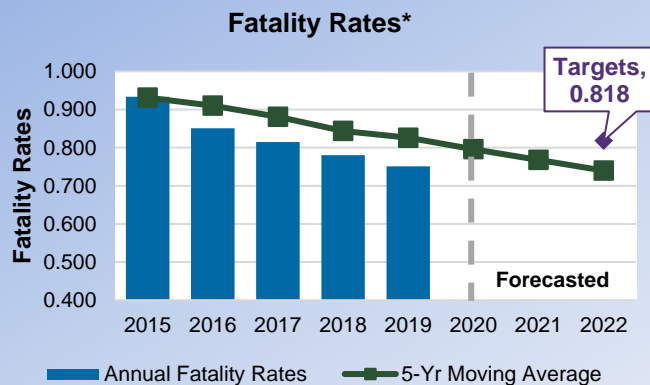
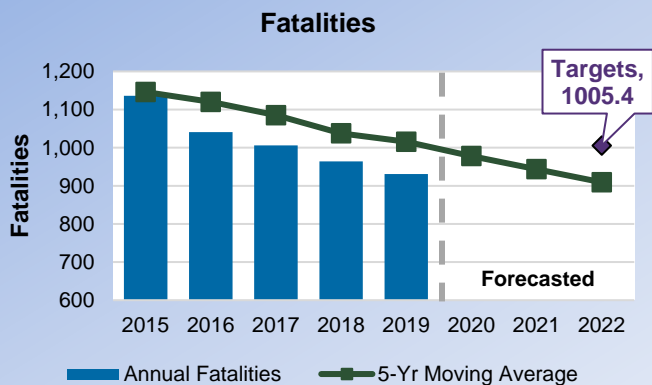
- VMT declined 5.5 percent between 2010 and 2019.
- Population increased less than 1 percent in the same timeframe.
- NYS has a host of safety programs designed to reduce fatal and serious injury crashes including the HSIP program, NYC's Vision Zero and the NYSDOT Pedestrian Safety Action Plan (PSAP).

The safety program goal is to continue to reduce crashes despite the impacts of COVID-19. A conservative target of a 1% decrease between 2019 and 2022 was selected due to the impacts of COVID on crashes and vehicle miles of travel.

2022 Targets and Supporting Data

Measure	Last Annual and 5 yr. baseline		Step 1: Forecast Using 5-Yr Moving Average Trendline		Step 2: Round and apply 1% Cap	
	2019 Annual	2019 Baseline 2015-2019 avg.	2022 Forecast	% Change 2018-2022 vs. 2015-2019	Rounded / Capped Percent	NYSDOT Target 2022
Number of Fatalities	931.0	1,015.6	909.3	-10.5%	-1.0%	1,005.4
Fatality Rate	0.751	0.826	0.740	-10.8%	-1.0%	0.818
Number of Serious Injuries	11,712.0	11,286.8	10,904.9	-3.4%	-1.0%	11,173.9
Serious Injury Rate	9.446	9.176	8.870	-3.4%	-1.0%	9.084
Number of Non-Motorized Fatalities and Serious Injuries	2,854.0	2,670.8	2,448.9	-8.3%	-1.0%	2,644.1

Graphs



Note: The 5-yr. trend was generated using the FORECAST function in Excel. The 5 yr. trend used the 5-yr. averages on 2011-2015, 2012-2016, 2013-2017, 2014-2018, and 2015-2019 data.

*Fatality Rate computed using VMT from FHWA Highway Statistics Series, Table VM-2

**Serious Injury Rate computed using VMT from FHWA Highway Statistics Series, Table VM-2

*** Based on combined total of Pedestrian Fatalities and Bicyclist and Other Cyclist Fatalities from FARS.