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# Massachusetts Department of Transportation Safety Performance Measures

January 2024

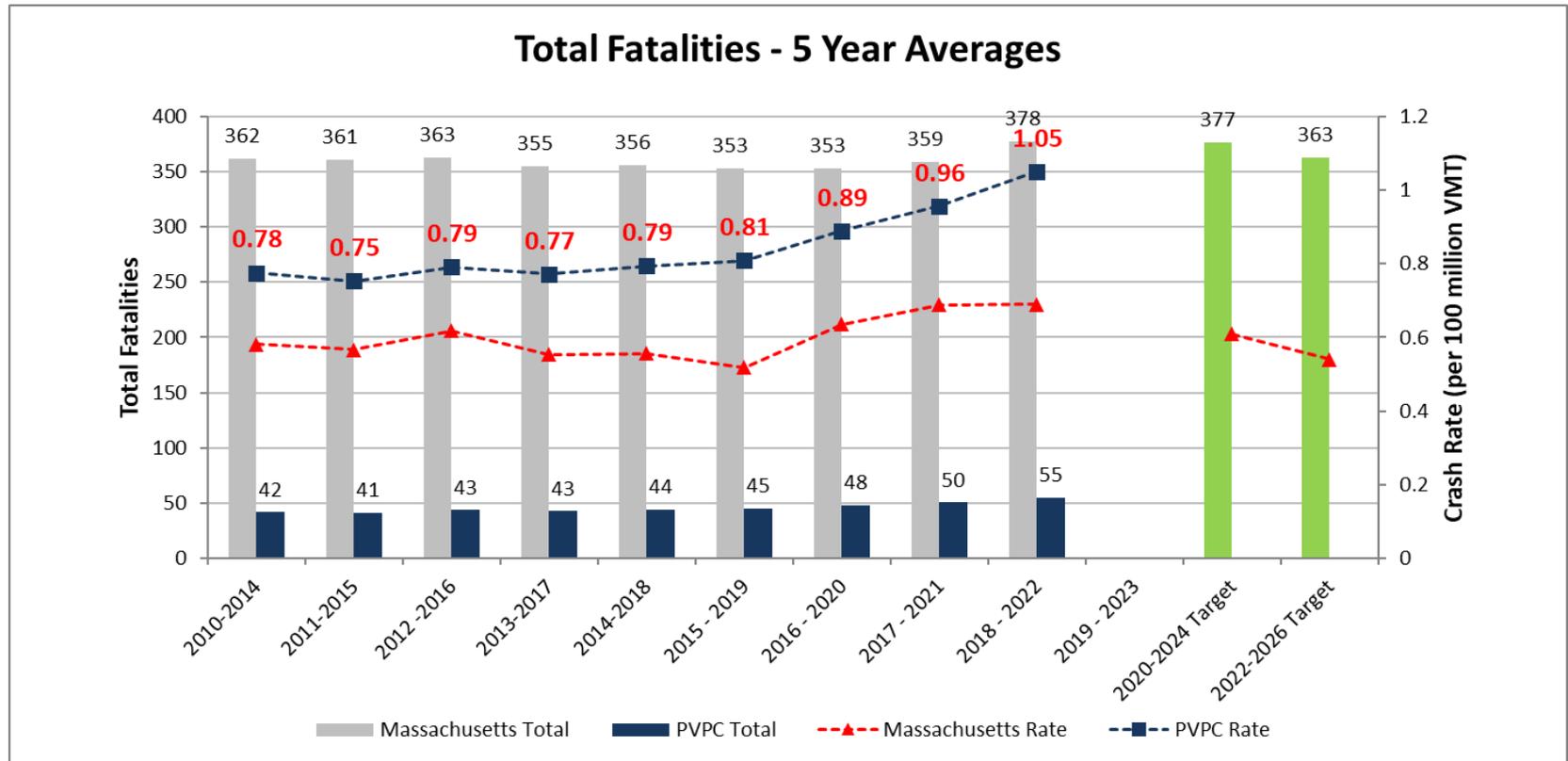
# Performance Measure Setting Background

- Required under MAP-21 (Section 1203), continued with FAST Act and BIL.
- MPO Performance Measure targets required for the following:
  - PM1 – Safety Measures – Set in January 2024
  - PM2 – Pavement/Bridge Performance – February 2023
  - PM3 – System Performance Measures – February 2023
- Other Information:
  - MPOs establish their own set of quantifiable performance targets or
  - MPOs adopt state performance targets (for the entire Commonwealth – no quantifiable targets required for region)
  - Targets must be incorporated into Certification Documents
  - Targets must be updated:
    - PM1 = Annually
    - PM2, PM3 = Every 2 – 4 years

# Safety Performance Measure Requirements

- Five annual safety targets required by State DOTs and MPOs:
  - Total number of fatalities
  - Rate of fatalities per 100 million vehicle miles traveled (VMT)
  - Total number of serious injuries
  - Rate of serious injuries per 100 million VMT
  - Total number of non-motorized fatalities and serious injuries

# 2024 and 2026 MassDOT Safety Performance Measures



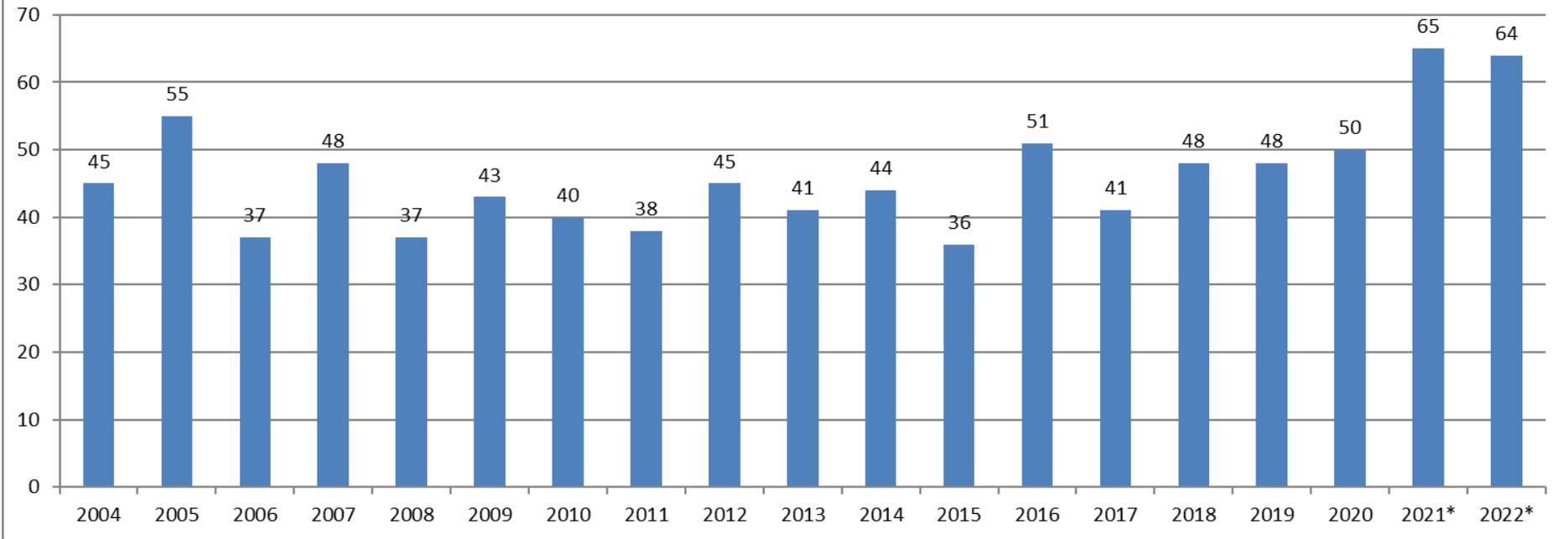
- MassDOT developed new targets by projecting the 2023 and 2024 fatalities to be in line with pre-COVID data. As a result, year over year changes reflect a decrease of approximately 20% when comparing 2021 and 2022 to 2023 and 2024. However, the 5-year average from 2018-2022 to 2020-2024 sees only a minor decrease from 378 to 377. If this trend continues, the 2022-2026 average will drop to 362, a reduction 4%. The regional increase in the crash rate/100 million VMT is a result of rising fatality totals and low 2020 VMT numbers due to COVID.
- The fatalities in the PVPC region increased after 2020 due to lingering effects of the pandemic. A downward trend is expected to reduce the total number of fatalities in future.

# Fatality and Fatality Rate Targets

- This year, MassDOT also developed a 2022-2026 target to be consistent with the Highway Safety Office and National Highway Traffic Safety Administration (NHTSA).
- Due to higher rates of speeding caused by decreased vehicle miles traveled (VMT) amid pandemic shutdowns in 2020 and the lingering impacts in 2021 and 2022, roadway fatalities were increasing relative to previous years.
- The Infrastructure Investment and Jobs Act (IIJA) requires “performance targets to demonstrate constant or improved performance,” so Massachusetts is unable to use increasing targets.
- As a result, the year over year change reflects a decrease of approximately 20% in fatalities from 2021/2022 to 2023/2024. However, the 5-year average from 2018-2022 to 2020-2024 sees only a minor decrease from 378 to 377.
- If this trend continues, the 2022-2026 average will drop to 362, a reduction 4%.
- As always, MassDOT’s overarching goal is zero deaths and this goal will be pursued by implementing strategies from the [Strategic Highway Safety Plan](#) (SHSP). The Massachusetts SHSP and [Vulnerable Road User Safety Assessment](#) were both updated and finalized in 2023.
- The fatality rate represents five-year average fatalities divided by five-year average VMTs.
- The COVID-19 pandemic greatly impacted VMT, causing fatality rates to spike in 2020 with significantly lower VMT and slightly higher fatalities, along with lingering impacts in 2021 and 2022. PVPC experienced a higher spike than the State due to higher reduction in the vehicle miles travelled.
- Data projections for the expected vehicle miles travelled in the State for CY2023 indicate that the VMT will exceed pre-pandemic levels. Consequently, the five-year average fatality rate is expected to decrease from 0.62 fatalities per 100 million VMT for 2018-2022, to 0.61 fatalities per 100 million VMT in 2020-2024, a reduction of 1.63% If this trend continues, MassDOT projects a decrease to 0.54 fatalities per 100 million VMT, a reduction of 12%.

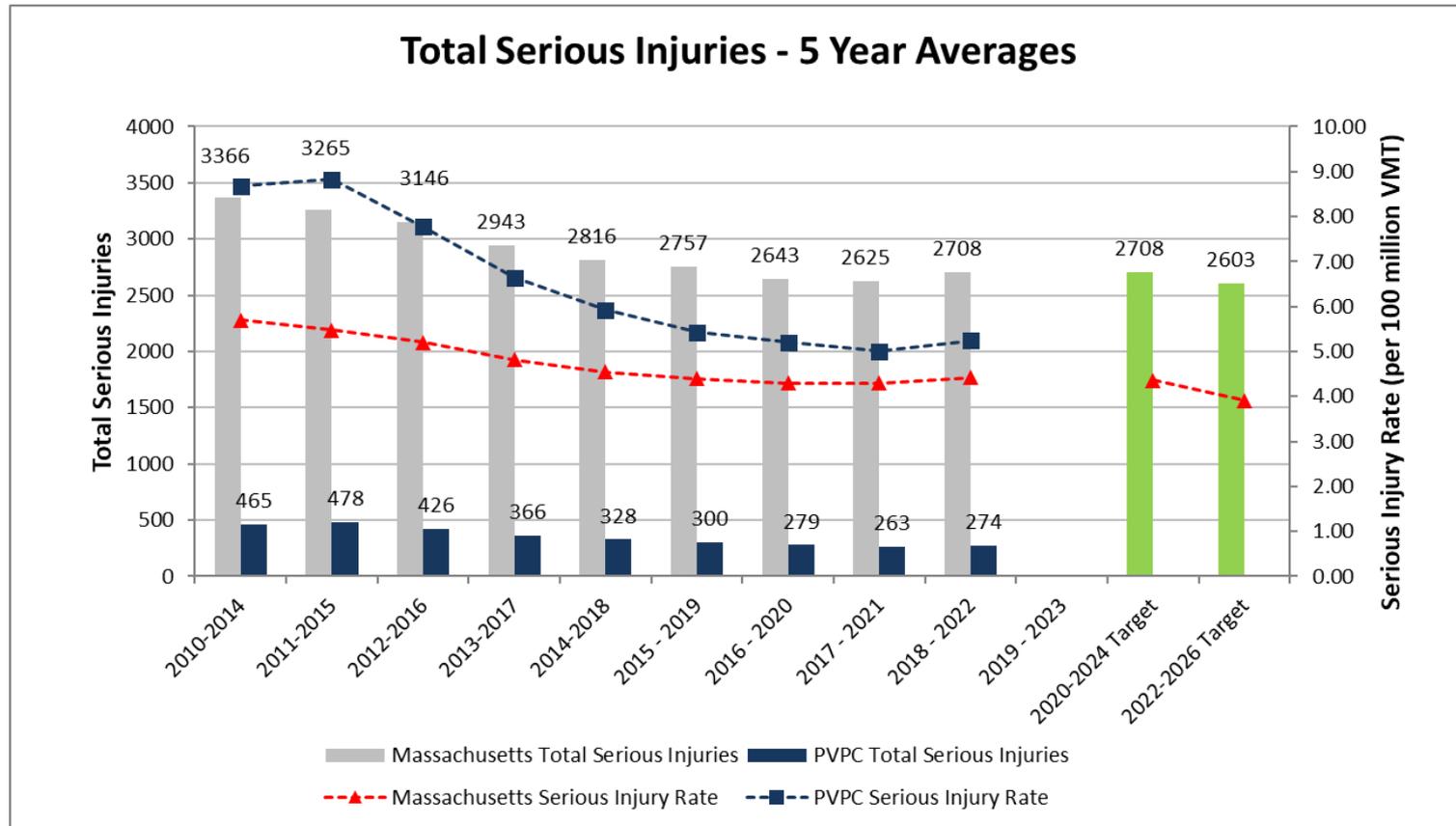
# 2024 and 2026 MassDOT Safety Performance Measures

## Total Fatalities in the PVPC Region



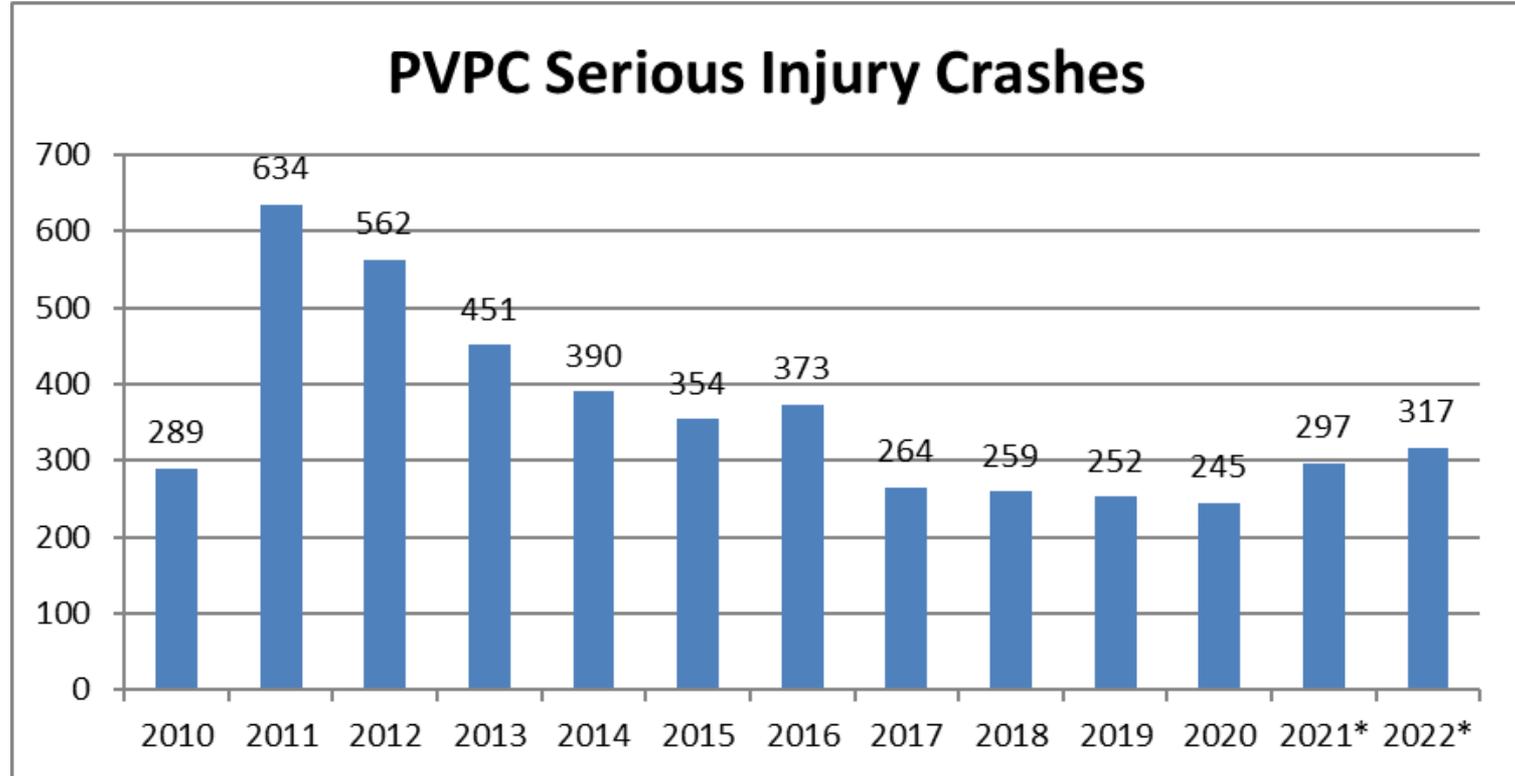
\*Note: The data for 2021 and 2022 was not finalized in the Statewide crash data reporting system (IMPACT) during the time of this analysis therefore there is a possibility that the numbers might change.

# 2024 and 2026 MassDOT Safety Performance Measures



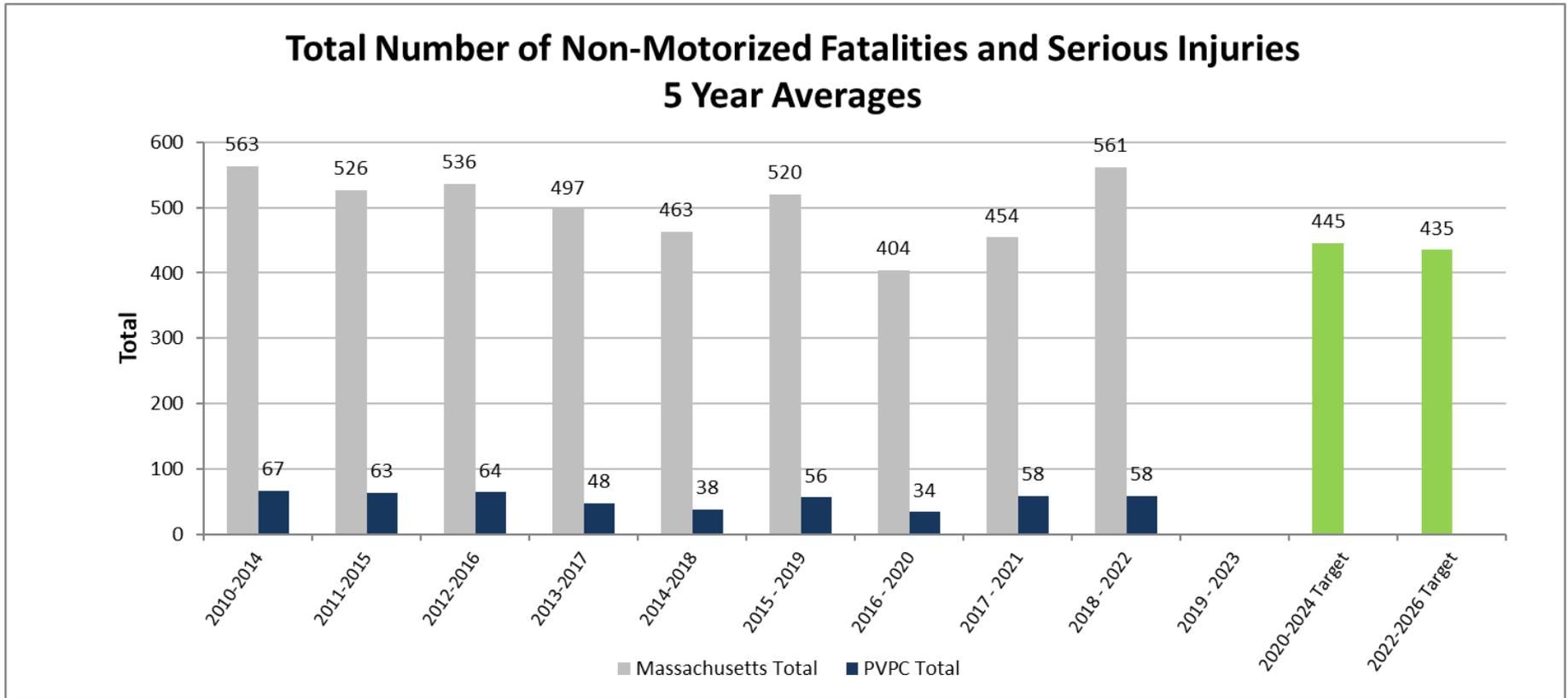
- Year over year changes reflect a decrease of approximately 10% when comparing 2021 and 2022 to 2023 and 2024. However, the 5-year average from 2018-2022 to 2020-2024 remains the same at 2,708 serious injuries. If this trend continues, the 2022-2026 average will drop to 2,603, a 4% reduction.
- The trend of serious injury crashes in the regio closely follows the pattern Statewide.

# 2024 and 2006 MassDOT Safety Performance Measures



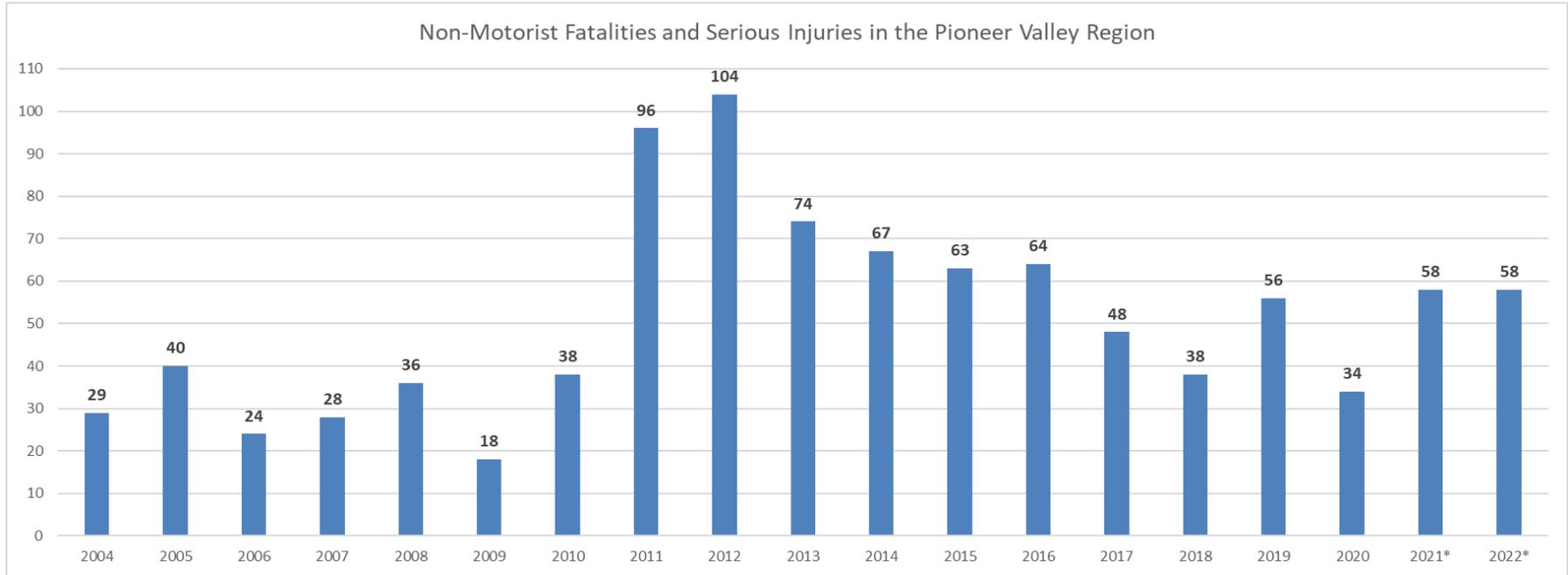
\*Note: The data for 2021 and 2022 was not finalized in the Statewide crash data reporting system (IMPACT) during the time of this analysis therefore there is a possibility that the numbers might change.

# 2024 and 2026 MassDOT Safety Performance Measures



- Regional trends for this category are similar to the Statewide trends. There is a continuing downward trend in the five-year average. Increases in non-motorized fatalities and serious injuries have occurred in recent years and that could slightly increase the five-year average in short term.

# 2024 and 2026 MassDOT Safety Performance Measures



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# 2024 and 2026 Safety Performance Measure Targets

**Massachusetts Calendar Year 2024 and 2026 Safety Performance Measures Targets**

Performance Measure	State Target 2024	State Target 2026
<b>Total Number of Fatalities</b>	Reduce the 5-year average fatalities to 377 or less statewide with an overarching goal of zero fatalities.	Reduce the 5-year average fatalities to 362 or less statewide with an overarching goal of zero fatalities.
<b>Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)</b>	Reduce the Rate of Fatalities to 0.61/100 million VMT or less statewide with an overarching goal of zero fatalities/100 million VMT.	Reduce the Rate of Fatalities to 0.54/100 million VMT or less statewide with an overarching goal of zero fatalities/100 million VMT.
<b>Total Number of Serious Injuries</b>	Reduce the 5-year average of the total number of Serious Injuries to 2708 or less statewide	Reduce the 5-year average of the total number of Serious Injuries to 2603 or less statewide
<b>Rate of Serious Injuries per 100 Million VMT</b>	Reduce the Rate of Serious Injuries to 4.36/100 million VMT or less statewide	Reduce the Rate of Serious Injuries to 3.91/100 million VMT or less statewide
<b>Total Number of Non-Motorized Fatalities and Serious Injuries</b>	Decrease the 5-year average of non-motorist fatalities and serious injuries to 445 (2020-2024) or less, a 7.3% reduction	Decrease the 5-year average of non-motorist fatalities and serious injuries to 435, a 9% reduction.