

# Highway safety improvement program

**2024 Performance Targets**

# Highway Safety Improvement Program (HSIP)

- Map-21 mandated FHWA to develop a rule for safety performance measures and targets
- Performance management ties together 3 state documents:
  - **NHDOT** Highway Safety Improvement Program (HSIP)
  - **NHDOT** Strategic Highway Safety Plan (SHSP),
  - **NH Office of Highway Safety (NHOHS)** Highway Safety Plan (**Department of Safety**)
- State must coordinate with **MPOs** to establish required target
- MPOs have the option to develop targets specific to their region
- Applicable to all public roadways

# Measures and Targets

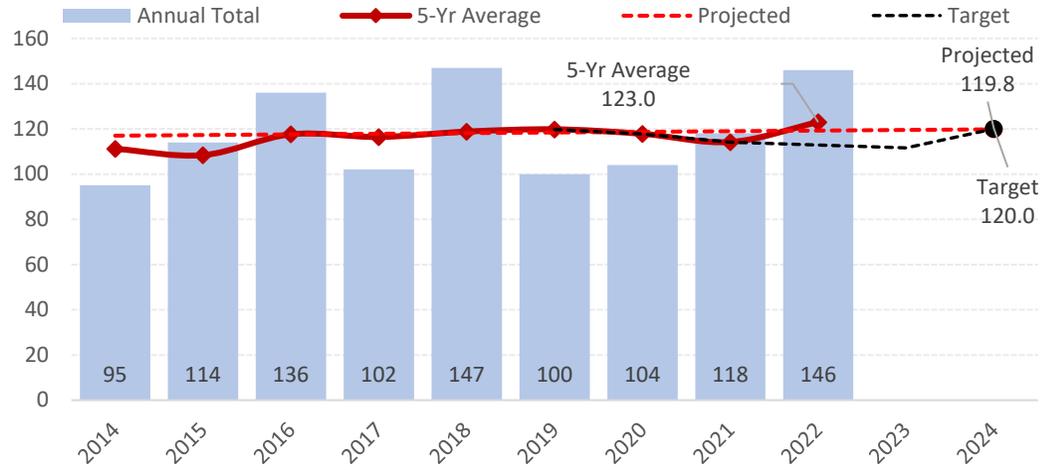
- Performance Measures and targets cover five areas:
  - Number of Fatalities
  - Rate of Fatalities per 100 Million Vehicle Miles of Travel (VMT)
  - Number of Serious Injuries
  - Rate of Serious Injuries per 100 Million VMT
  - Total Non-Motorized Fatalities and Serious Injuries
- Annual NHDOT HSIP targets by **August 31<sup>st</sup>** each year
- MPO targets **within 180 days** after that (~February 27)
- MPO Has option to support state targets or develop their own
- MPO can expand measures beyond those that are required
  - Number of Motorcycle Fatalities

# HSIP Targets for Calendar Year 2024

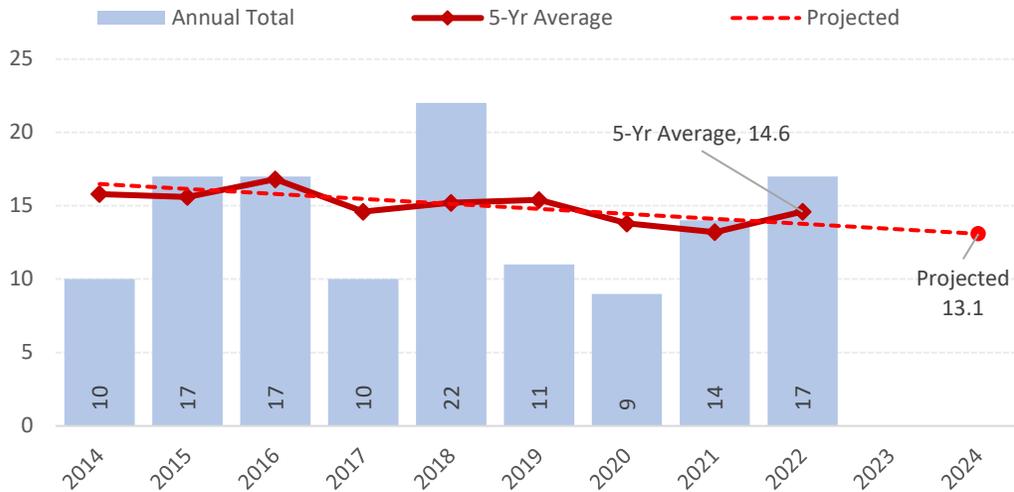
Measure	2022 Values		2024 Targets					
	Yearly	Five-Year Average	Trend Based Target	New Hampshire		MPO Region		2024 Target
				Current Trend	Desired Trend	Current Trend	Desired Trend	
Number of Fatalities	146	123.0	119.8					<b>120.0</b>
Fatality Rate per 100 Million VMT	1.100	0.932	0.917					<b>0.919</b>
Number of Serious Injuries	594	503.2	515.1					<b>509.6</b>
Serious Injury Rate per 100 Million VMT	4.480	3.827	3.960					<b>3.877</b>
Non-Motorized Fatalities and Serious Injuries	51	42.4	31.7					<b>39.4</b>
Motorcycle Fatalities (MPO Only)	6	3.20	3.2					<b>2.2</b>

# Fatalities

**Figure 4: Statewide Fatalities  
2024 Projected**



**Figure 5: RPC Fatalities - 2024 Projected**



Year	Annual Crash Fatalities		5-Year Rolling Average Crash Fatalities		
	NH	MPO Region	5-Year Period	New Hampshire	MPO Region
2014	95	10	2010-2014	111.2	15.8
2015	114	17	2011-2015	108.4	15.6
2016	136	17	2012-2016	117.6	16.8
2017	102	10	2013-2017	116.4	14.6
2018	147	22	2014-2018	118.8	15.2
2019	100	11	2015-2019	119.8	15.4
2020	104	9	2016-2020	117.8	13.8
2021	118	14	2017-2021	114.2	13.2
2022	146	17	2018-2022	123.0	14.6

# Fatality Rate

Figure 7: Statewide Fatality Rate  
2024 Projected

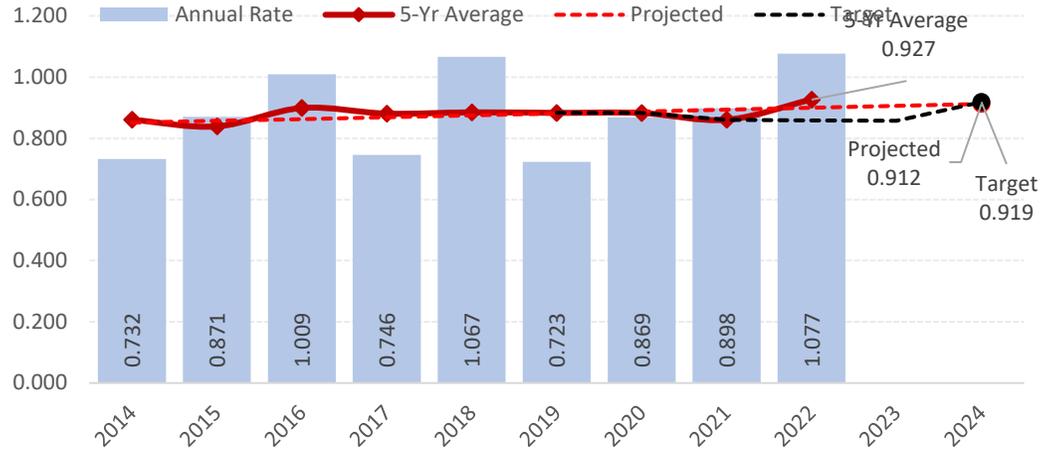
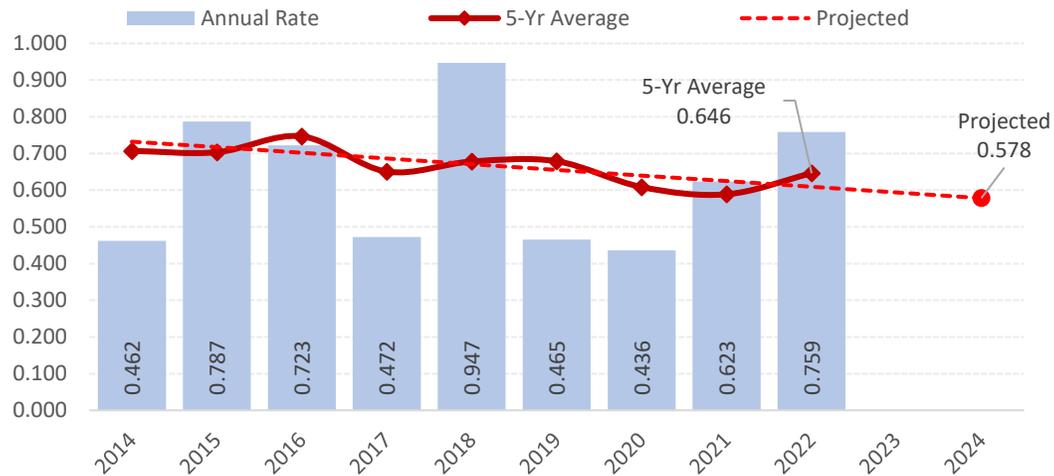


Figure 8: RPC Fatality Rate - 2024 Projected (per 100 Million VMT)



Year	100 Million Vehicle Miles of Travel (VMT)		Fatality Rate per 100 Million VMT		5-Year Period	5-Year Average Fatality Rates per 100 Million VMT	
	New Hampshire	MPO Region	New Hampshire	MPO Region		New Hampshire	MPO Region
2014	129.70	21.65	0.732	0.462	2010-2014	0.861	0.707
2015	130.94	21.61	0.871	0.787	2011-2015	0.839	0.703
2016	134.76	23.53	1.009	0.723	2012-2016	0.899	0.747
2017	136.81	21.18	0.753	0.472	2013-2017	0.881	0.650
2018	137.76	23.24	1.074	0.947	2014-2018	0.885	0.678
2019	138.57	23.64	0.729	0.464	2015-2019	0.883	0.679
2020	119.70	20.66	0.869	0.436	2016-2020	0.882	0.608
2021	131.33	22.46	0.898	0.623	2017-2021	0.861	0.589
2022	<b>135.58</b>	<b>22.40</b>	<b>1.077</b>	<b>0.759</b>	2018-2022	<b>0.927</b>	<b>0.646</b>

# Serious Injuries

Figure 10: Statewide Serious Injuries  
2024 Projected

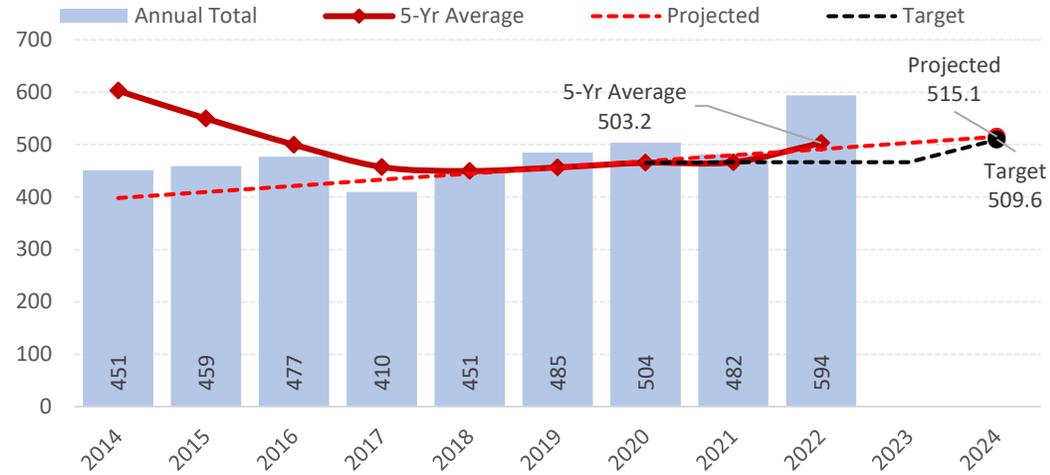
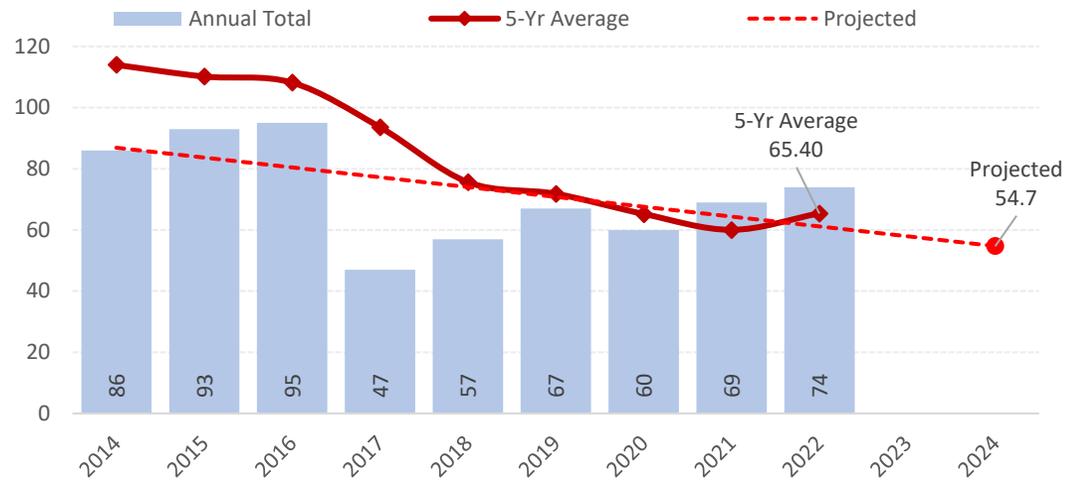


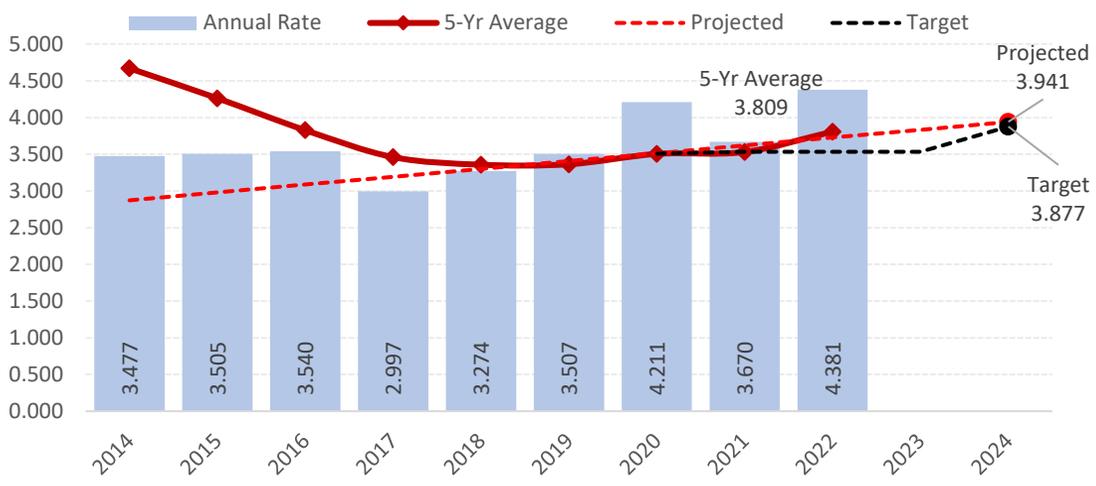
Figure 11: RPC Serious Injuries - 2024 Projected



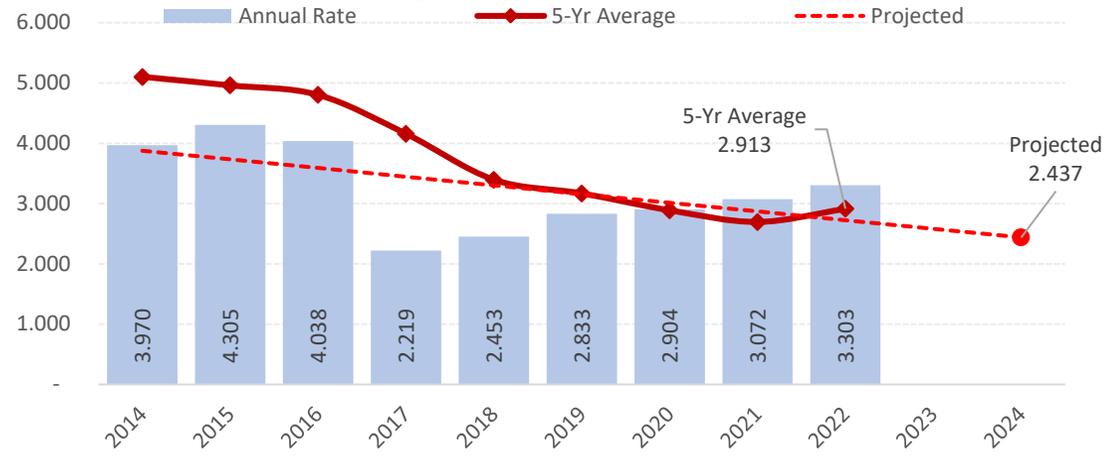
Year	NH Serious Injuries	MPO Region Serious Injuries	5-Year Period	5-Year Rolling Average Serious Injuries	
				NH	MPO Region
2014	451	86	2010-2014	602.8	114.0
2015	459	93	2011-2015	549.8	110.2
2016	477	95	2012-2016	499.8	108.2
2017	410	47	2013-2017	457.2	93.6
2018	451	57	2014-2018	449.6	75.6
2019	485	67	2015-2019	456.4	71.8
2020	<b>504</b>	<b>60</b>	2016-2020	465.4	65.2
2021	482	69	2017-2021	466.4	60.0
2022	<b>594</b>	<b>74</b>	2018-2022	<b>503.2</b>	<b>65.4</b>

# Rate of Serious Injuries

**Figure 13: Statewide Serious Injury Rate  
2024 Projected**



**Figure 14: RPC Serious Injury Rate  
2024 Projected  
(per 100 Million VMT)**



Year	100 Million Vehicle Miles of Travel (VMT)		Serious Injury Rate per 100 Million VMT		5-Year Period	5-Year Average Fatality Rates per 100 Million VMT	
	NH	MPO Region	NH	MPO Region		NH	MPO Region
2014	129.70	21.65	3.477	3.970	2010-2014	4.671	5.103
2015	130.94	21.61	3.505	4.305	2011-2015	4.264	4.961
2016	134.76	23.53	3.540	4.038	2012-2016	3.829	4.803
2017	136.81	21.18	2.997	2.219	2013-2017	3.462	4.158
2018	137.76	23.24	3.274	2.453	2014-2018	3.359	3.397
2019	138.57	23.69	3.507	2.828	2015-2019	3.363	3.168
2020	119.70	20.33	4.211	2.904	2016-2020	3.518	2.888
2021	131.33	22.46	3.670	3.072	2017-2021	3.532	2.696
2022	<b>135.58</b>	<b>22.40</b>	<b>4.381</b>	<b>3.303</b>	2018-2022	<b>3.809</b>	<b>2.913</b>

# Non-Motorized Fatalities & Serious Injuries

Figure 16: Statewide Non-Motorized Fatalities & Serious Injuries - 2024 Projected

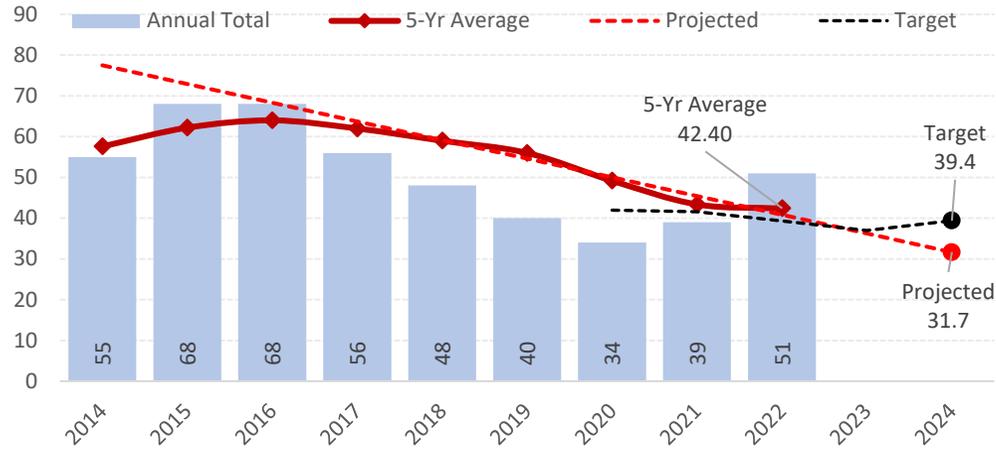
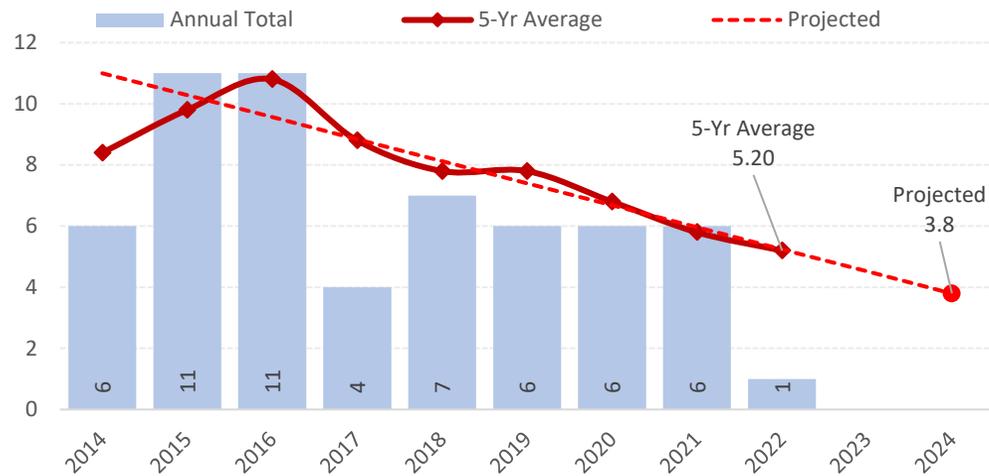


Figure 17: RPC Non-Motorized Fatalities & Serious Injuries 2024 Projected



Year	New Hampshire Non-Motorized Crashes			MPO Region Non-Motorized Crashes			5-Year Rolling Average Non-Motorized Fatalities & Serious Injuries		
	Fatalities	Serious Injuries	Total	Fatalities	Serious Injuries	Total	5-Year Period	NH	MPO Region
2014	16	39	55	0	6	6	2010-2014	51.8	8.4
2015	14	54	68	2	9	11	2011-2015	56.4	9.8
2016	21	47	68	1	10	11	2012-2016	54.2	10.8
2017	15	41	56	0	4	4	2013-2017	55.0	8.8
2018	14	34	48	5	2	7	2014-2018	51.6	7.8
2019	10	30	40	0	6	6	2015-2019	48.6	7.8
2020	11	20	31	1	5	6	2016-2020	42.0	6.8
2021	10	29	39	2	4	6	2017-2021	41.6	5.8
2022	20	31	51	1	0	1	2018-2022	42.4	2.9

# Motorcycle Fatalities (MPO Only)

Figure 19: Statewide Motorcycle Fatalities - 2024 Projected

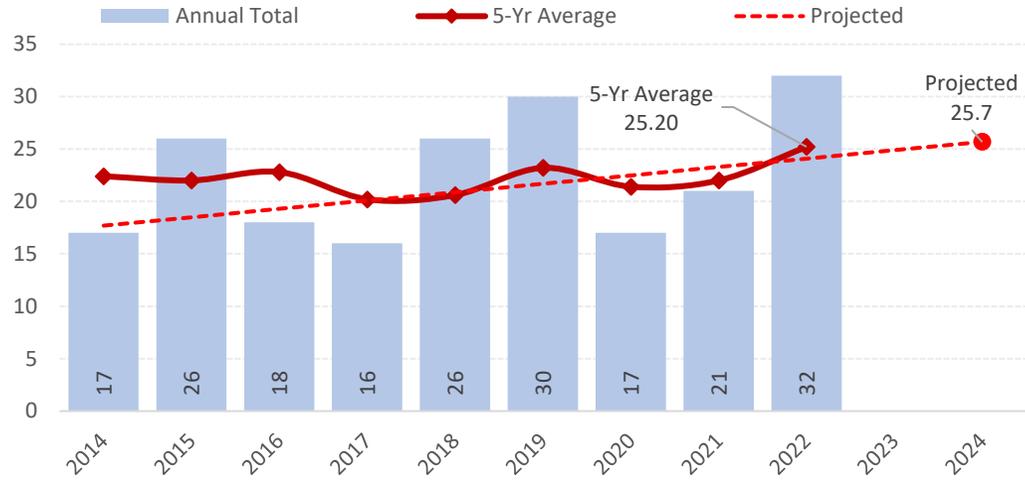


Figure 20: RPC Motorcycle Fatalities - 2024 Projected

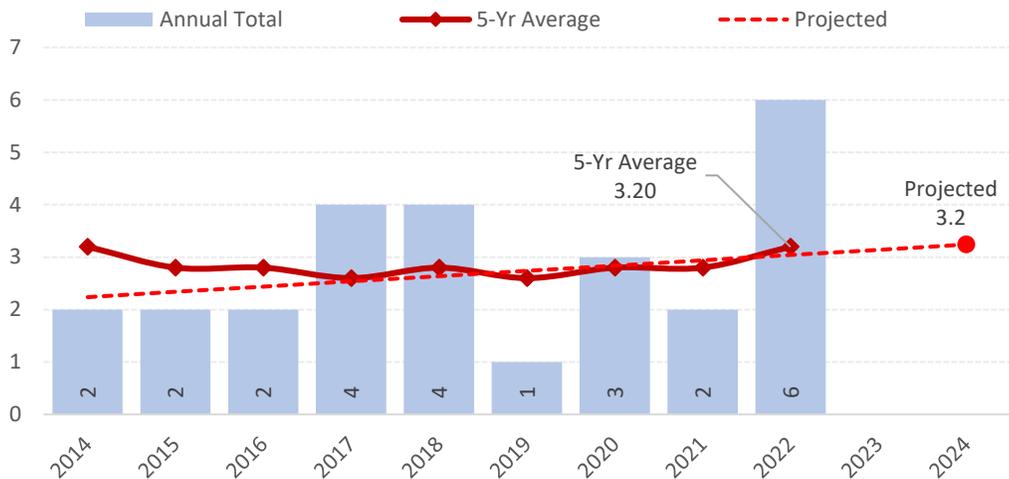


Table 8: Motorcycle Fatalities

Year	Annual Motorcycle Crash Fatalities		5-Year Rolling Average Crash Fatalities	5-Year Rolling Average Crash Fatalities	
	NH	MPO Region		NH	MPO Region
2014	16	2	2010-2014	23.20	3.20
2015	26	2	2011-2015	22.40	2.60
2016	18	2	2012-2016	22.80	2.60
2017	15	3	2013-2017	20.20	2.60
2018	26	4	2014-2018	20.60	2.80
2019	30	1	2015-2019	23.20	2.60
2020	17	3	2016-2020	21.40	2.80
2021	21	2	2017-2021	22.00	2.80
2022	32	6	2018-2022	25.20	3.20

# State HSIP Targets for Calendar Year 2024

- Staff Recommend:
  - That RPC support the established State HSIP targets for Number and Rate of Fatalities, Number and Rate of Serious Injuries, and Total Non-Motorized Fatalities and Serious Injuries.
  - That the MPO adopt MPO only target for Motorcycle Fatalities.

Measure	2022 Values		Trend Based Target	2024 Targets				2024 Target
	Yearly	Five-Year Average		New Hampshire		MPO Region		
				Current Trend	Desired Trend	Current Trend	Desired Trend	
Number of Fatalities	146	123.0	119.8	↗	↘	↗	↘	120.0
Fatality Rate per 100 Million VMT	1.100	0.932	0.917	↗	↘	↗	↘	0.919
Number of Serious Injuries	594	503.2	515.1	↗	↘	↗	↘	509.6
Serious Injury Rate per 100 Million VMT	4.480	3.827	3.960	↗	↘	↗	↘	3.877
Non-Motorized Fatalities and Serious Injuries	51	42.4	31.7	↗	↘	↘	↘	39.4
Motorcycle Fatalities (MPO Only)	6	3.20	3.2	↗	↘	↗	↘	2.2

# Regional Public Transportation Safety Performance Targets



**MPO Technical Advisory Committee**  
**December 7, 2023**



# Public Transportation Safety Requirements

- Federal Transit Administration (FTA) requirements for Public Transportation Agency Safety Plan (PTASP) became effective in 2019
- Compliance requirements were delayed until July 2021 due to COVID-19
- The PTASP rule includes requirements for transit operators in urbanized areas (e.g. COAST, MTA), metropolitan planning organizations (e.g. RPC) to adopt public transportation safety performance targets and track performance against those targets.

# Public Transportation Safety Requirements

- COAST last updated its PTASP in November 2023 including agency-level safety targets for FY2024
- Manchester Transit Authority (MTA) adopted its PTASP in February 2021 and nearly done with an update as of December 2023.
- Boston Express bus company last updated their PTASP in December 2022 with goals for FY2023.
- RPC practice is to update regional transit safety targets in conjunction with HSIP safety targets.

# Public Transportation Safety Measures

The federally-required public transportation safety measures include:

1. Number of Fatalities
2. Rate of Fatalities
3. Number of Injuries
4. Rate of Injuries
5. Number of Safety Events
6. Rate of Safety Events
7. System Reliability

System Reliability targets are based on the mean distance (number of miles) between significant mechanical failures.

Rate Targets are based on incidence per 100,000 Vehicle Revenue Miles (VRM)

# Public Transit Safety Targets: Safety Events

A “safety event” is an event that occurs on a transit right-of-way or infrastructure, at a transit revenue facility, at a maintenance facility or rail yard, during a transit related maintenance activity, or involving a transit revenue vehicle that includes, but is not limited to:

- 1) A fatality confirmed within 30 days;
- 2) An injury requiring transport away from the scene for medical attention;
- 3) An otherwise serious injury; or
- 4) Substantial property damage to facilities equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency.

# Public Transit Safety Targets FY2024: COAST

COAST	Performance Measure	FY2022 Performance	FY2023 Target	FY2023 Performance	FY2024 Targets
Fixed Route	Fatalities - Total	0	0	0	0
	Fatalities - Rate	0	0	0	0
	Injuries - Total	0	0	1	0
	Injuries - Rate	0.0	0.0	0.17	0
	Safety Events - Total	1	0	0	0
	Safety Events - Rate	0.17	0.0	0.0	0
	System Reliability	16,130	17,000	13,053	17,000
Demand Response	Fatalities - Total	0	0	0	0
	Fatalities - Rate	0	0	0	0
	Injuries - Total	0	0	2	0
	Injuries - Rate	0.0	0.0	0.96	0
	Safety Events - Total	0	0	0	0
	Safety Events - Rate	0	0	0	0
	System Reliability	40,815	50,000	104,207	100,000

*All rates are expressed as a number per 100,000 Vehicle Revenue Miles*

# Public Transit Safety Targets FY2024: MTA

MTA	Performance Measure	FY2024 Targets
Fixed Route	Fatalities - Total	0
	Fatalities - Rate	0
	Injuries - Total	3
	Injuries - Rate	0.86
	Safety Events - Total	21
	Safety Events - Rate	3.6
	System Reliability	15,348
Demand Response	Fatalities - Total	0
	Fatalities - Rate	0
	Injuries - Total	0
	Injuries - Rate	0.0
	Safety Events - Total	3
	Safety Events - Rate	1.1
	System Reliability	16,692

*All rates are expressed as a number per 100,000 Vehicle Revenue Miles*

# Public Transit Safety Targets FY2023: Boston Express

<b>Boston Express</b>	<b>Performance Measure</b>	<b>FY2022 Target</b>	<b>FY2022 Performance</b>	<b>FY2023 Targets</b>
<b>Intercity Bus</b>	Fatalities - Total	0	0	0
	Fatalities - Rate	0	0	0
	Injuries - Total	5	2	1.8
	Injuries - Rate	0.48	0.28	0.25
	Safety Events - Total	9	11	9.9
	Safety Events - Rate	0.86	1.55	1.39
	System Reliability	32,658	354,259	425,110

*All rates are expressed as a number per 100,000 Vehicle Revenue Miles*

# Proposed MPO FY2024 Transit Safety Targets

	Performance Measure	COAST FY2024 Targets	MTA FY2024 Target	MPO FY2024 Draft Targets
Fixed Route	Fatalities - Total	0	0	<b>0</b>
	Fatalities - Rate	0	0	<b>0</b>
	Injuries - Total	0	3	<b>3</b>
	Injuries - Rate	0	1.6	<b>0.32</b>
	Safety Events - Total	0	21	<b>21</b>
	Safety Events - Rate	0	13.85	<b>2.24</b>
	System Reliability	17,000	15,348	<b>16,171</b>
Demand Response	Fatalities - Total	0	0	<b>0</b>
	Fatalities - Rate	0	0	<b>0</b>
	Injuries - Total	0	0	<b>0</b>
	Injuries - Rate	0	0.0	<b>0.0</b>
	Safety Events - Total	0	<b>3</b>	<b>3</b>
	Safety Events - Rate	0	1.1	<b>0.62</b>
	System Reliability	100,000	16,692	<b>58,346</b>

*All rates are expressed as a number per 100,000 Vehicle Revenue Miles*

# Proposed MPO FY2024 Intercity Transit Safety Targets

	Performance Measure	MPO FY2024 Draft Targets
Intercity Bus (Boston Express)	Fatalities - Total	<b>0</b>
	Fatalities - Rate	<b>0</b>
	Injuries - Total	<b>1.8</b>
	Injuries - Rate	<b>0.25</b>
	Safety Events - Total	<b>9.9</b>
	Safety Events - Rate	<b>1.39</b>
	System Reliability	<b>425,110</b>

*All rates are expressed as a number per 100,000 Vehicle Revenue Miles*

# Questions?

## Recommended Action

*Review the draft targets, ask questions as needed and recommend that the MPO Policy Committee vote to adopt the proposed MPO Public Transit Safety Targets for FY2024*

# HSIP vs Safety Action Plan

# Highway Safety Improvement Program (HSIP)

- Map-21 mandated FHWA to develop a rule for safety performance measures and targets
- Performance management ties together 3 state documents:
  - **NHDOT** Highway Safety Improvement Program (HSIP)
  - **NHDOT** Strategic Highway Safety Plan (SHSP),
  - **NH Office of Highway Safety (NHOHS)** Highway Safety Plan (**Department of Safety**)
- State must coordinate with **MPOs** to establish required target
- MPOs have the option to develop targets specific to their region
- Applicable to all public roadways

# Measures and Targets

- Performance Measures and targets cover five areas:
  - Number of Fatalities
  - Rate of Fatalities per 100 Million Vehicle Miles of Travel (VMT)
  - Number of Serious Injuries
  - Rate of Serious Injuries per 100 Million VMT
  - Total Non-Motorized Fatalities and Serious Injuries
- Annual targets for State and MPO
- MPO Has option to support state targets or develop their own
- MPO can expand measures beyond those that are required
  - Number of Motorcycle Fatalities

# Safety Action Plan (SAP) Components

- Leadership Commitment and Goal Setting
  - Public commitment and timeline for zero roadway fatalities and serious injuries
- Planning Structure
  - Committee Charged with oversight, implementation, and monitoring (Likely MPO Policy Committee)
- Safety Analysis
  - Existing conditions and historical trends
  - Location and severity analysis
  - Contributing factors and crash types
- Engagement and Collaboration
  - Robust engagement with stakeholders and public

# Safety Action Plan (SAP) Components

- **Equity Considerations**
  - Use inclusive and representative processes
  - Identify and collaborate with underserved communities
- **Policy and Process Changes**
  - Assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve or prioritize transportation safety.
- **Strategy and Project Selections**
  - Identify comprehensive set of projects and strategies that will address the safety problems identified in the analysis
  - Data, evidence, and stakeholder supported approaches
- **Progress and Transparency**
  - Identify and implement methods to measure progress over time
  - Ensure transparent sharing of progress and reporting

# Translating Annual Targets to Long Term Goals

- Annual HSIP Targets are based on what is expected from historic performance

Figure 5: RPC Fatalities - 2024 Projected

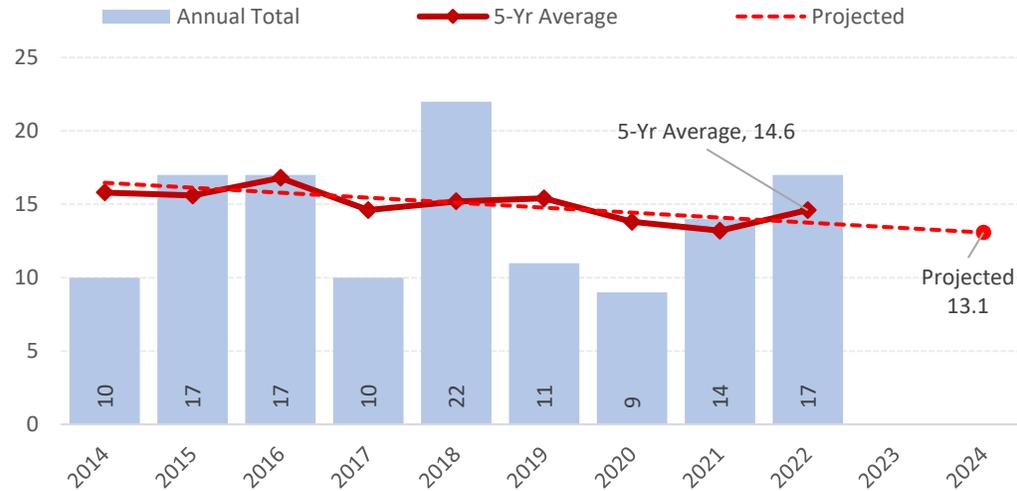
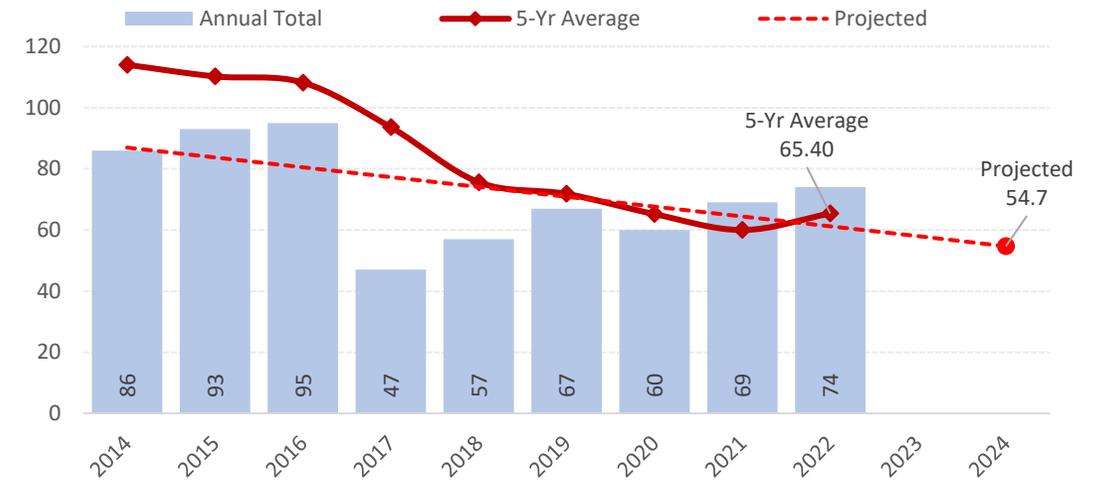
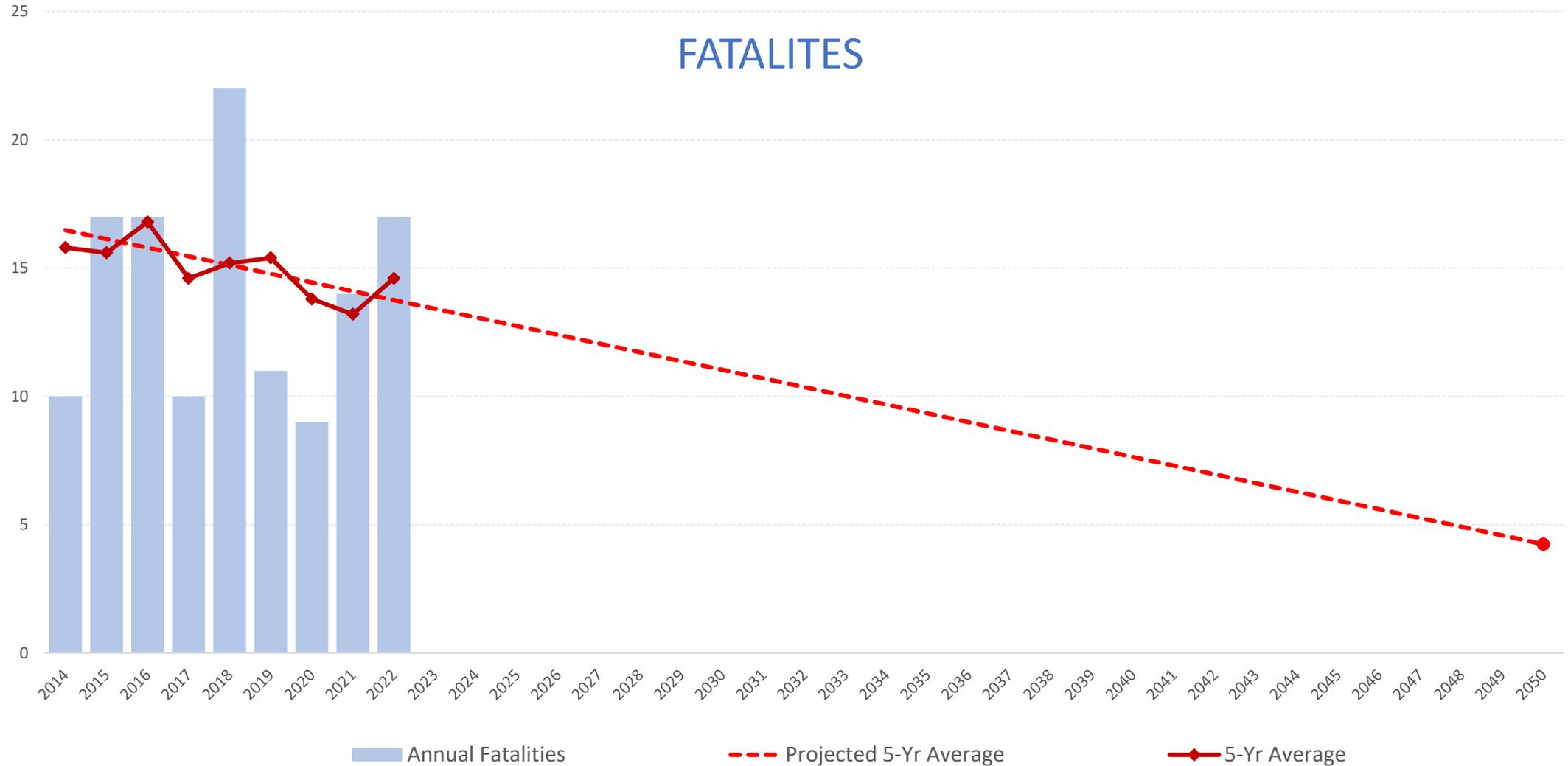


Figure 11: RPC Serious Injuries - 2024 Projected

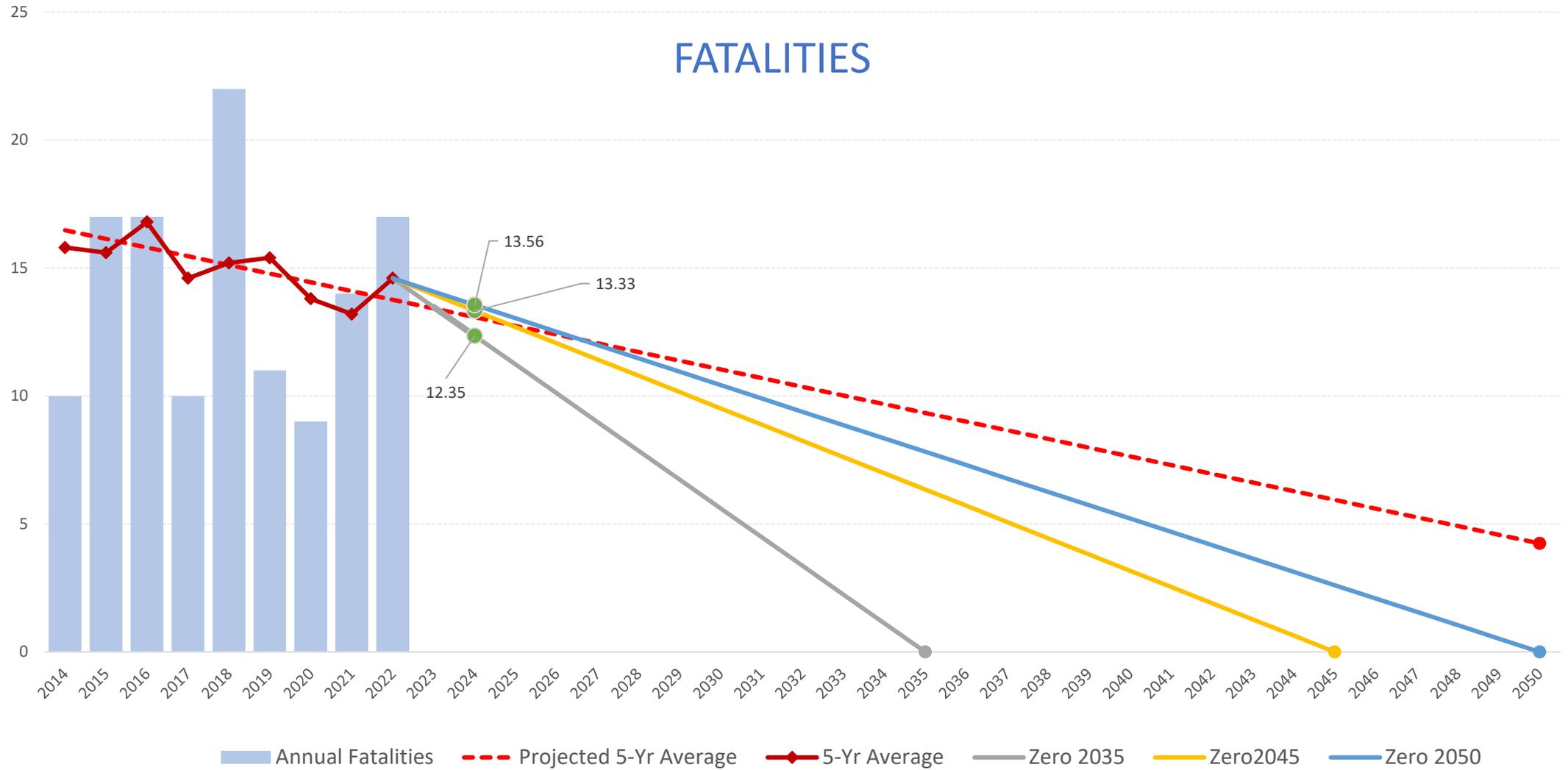


- Safety Action Plan Targets are based on “getting to zero”
  - The MPOs will need to select an appropriate date for that

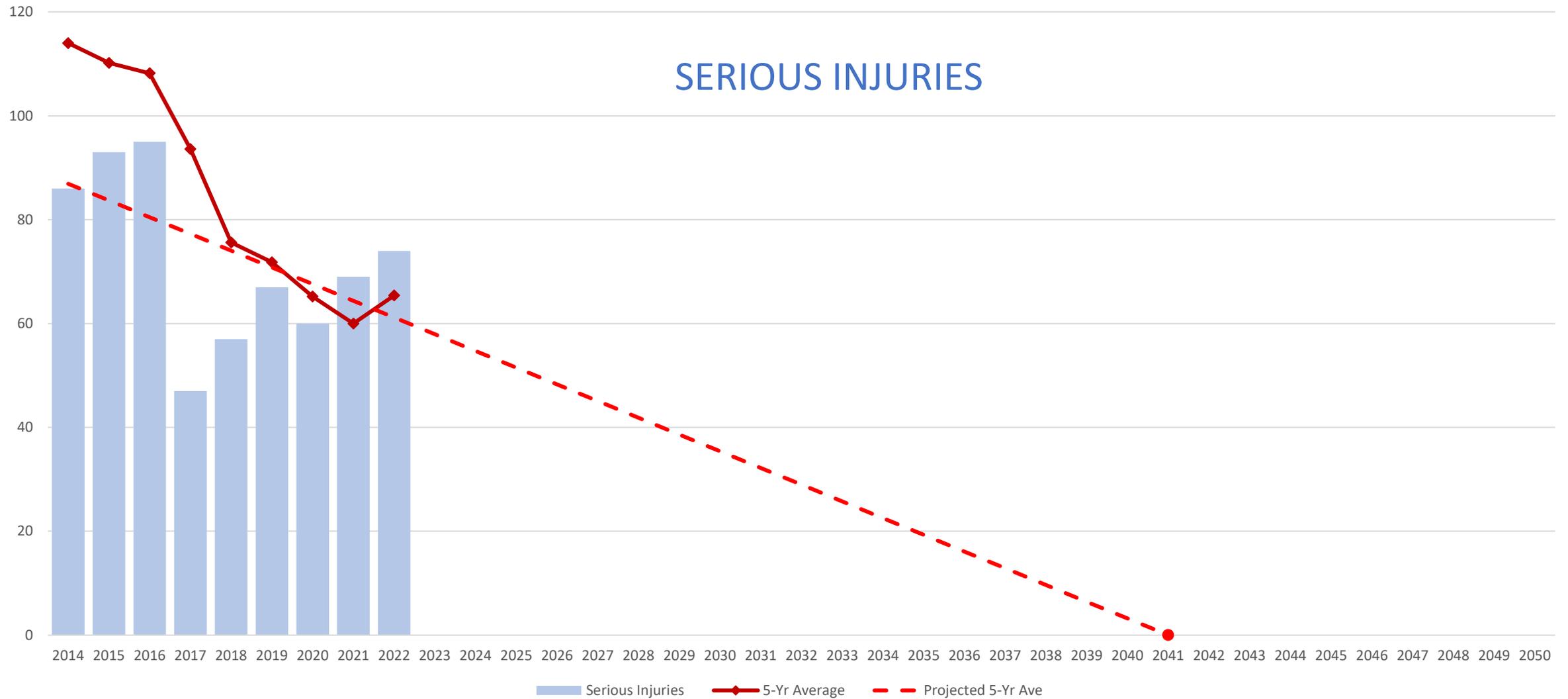
# Translating Annual Targets to Long Term Goals



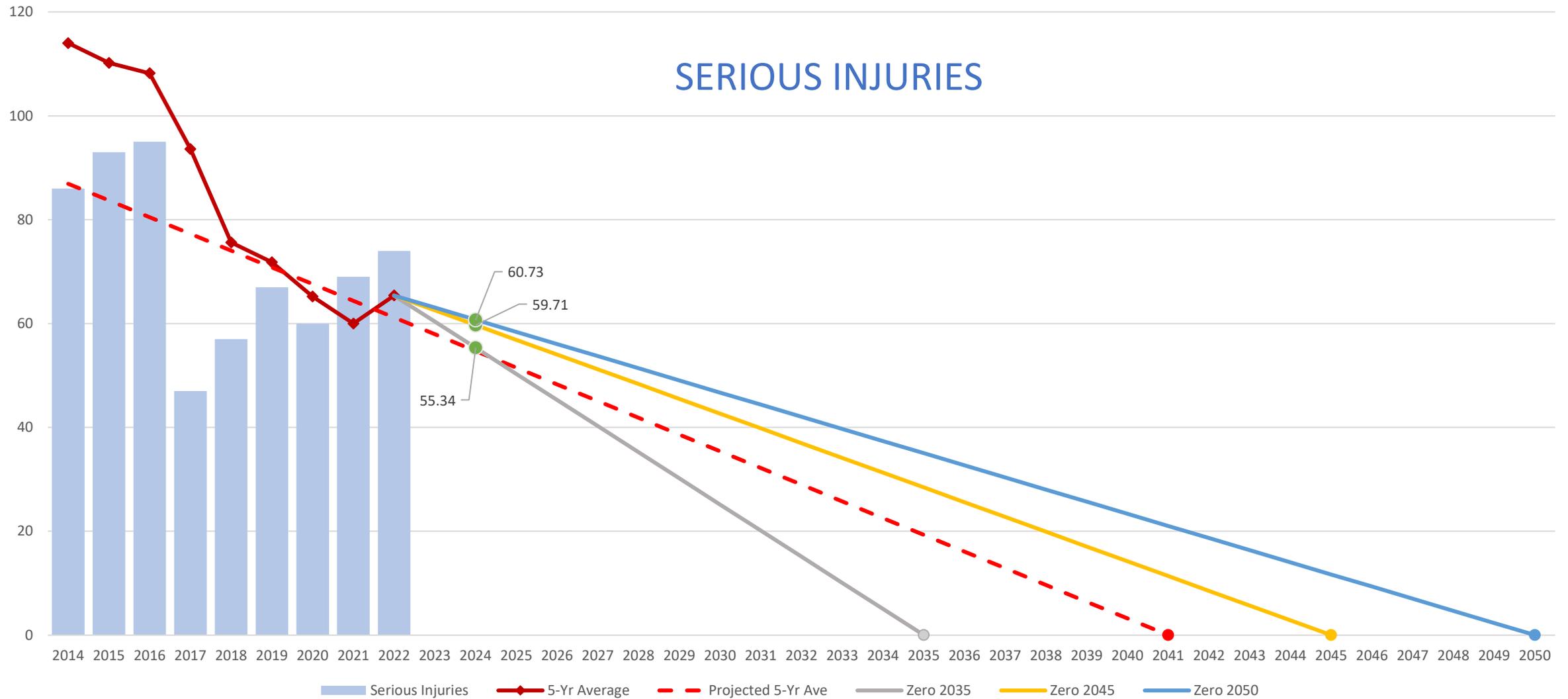
# Translating Annual Targets to Long Term Goals



# Translating Annual Targets to Long Term Goals



# Translating Annual Targets to Long Term Goals



■ Serious Injuries    ◆ 5-Yr Average    - - - Projected 5-Yr Ave    — Zero 2035    — Zero 2045    — Zero 2050

# HSIP Targets for 2024 with Vision Zero 2050 Goal

Measure	2022 Values		2024 Targets					Vision Zero 2050	
	Yearly	Five-Year Average	Trend Based Target	New Hampshire		MPO Region		State	2050
				Current Trend	Desired Trend	Current Trend	Desired Trend	2024 Target	MPO 2024 Target
Number of Fatalities	146	123.0	119.8					<b>120.0</b>	<b>13.56</b>
Fatality Rate per 100 Million VMT	1.100	0.932	0.917					<b>0.919</b>	<b>0.609</b>
Number of Serious Injuries	594	503.2	515.1					<b>509.6</b>	<b>60.73</b>
Serious Injury Rate per 100 Million VMT	4.480	3.827	3.960					<b>3.877</b>	<b>2.705</b>
Non-Motorized Fatalities and Serious Injuries	51	42.4	31.7					<b>39.4</b>	<b>4.83</b>
Motorcycle Fatalities (MPO Only)	6	3.20	3.2					<b>None</b>	<b>2.97</b>

# Summary

- Safety Action Plan is a full planning process and not just a technical exercise like the HSIP Performance Targets
- TAC will act as a regional stakeholder committee
  - Need to think about other stakeholders such as seniors, bike/ped, emergency services, etc. and options to engage them
- MPO will be looking to establish long range targets of zero fatalities and serious injuries
  - Need to consider the planning horizon
  - Need to consider other measures and targets that make sense for the region and can utilize available data.
- Policy and Process Changes
  - Are there local policies that can be changed to improve transportation safety?
- Strategy and Project Selections
  - Will be looking for specific projects identified by communities and other stakeholders.