

# Highway safety improvement program

**2023 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
  - Number of Serious Injuries
  - Rate of Serious Injuries
  - 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

# Target Setting Process

- Number Targets: 5-Year rolling average number
  - Add number for the measure for most recent five years and divide by 5
  - Round to the tenth decimal place.

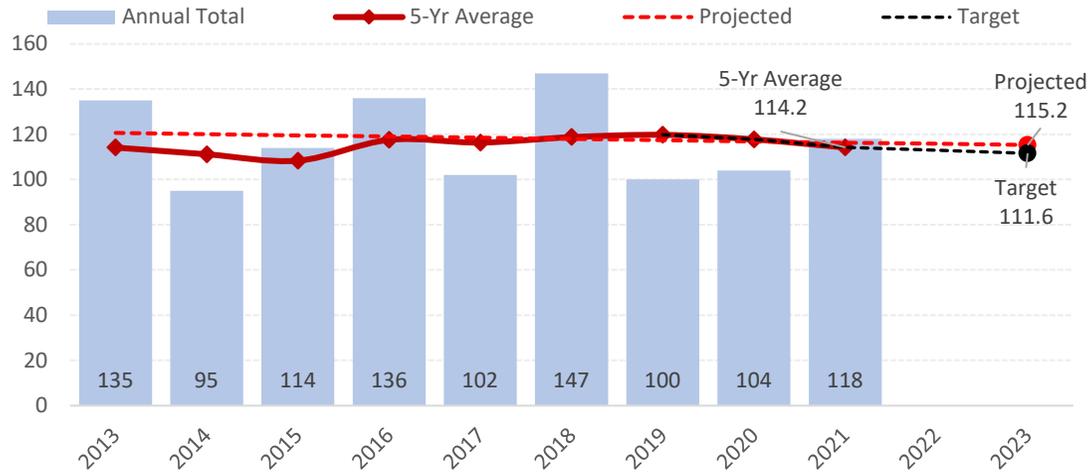
$$135 + 95 + 114 + 136 + 102 = 582 / 5 = 116.4 \text{ Average Fatalities}$$

- Rate Targets: Rate of measure per 100 Million Vehicle Miles of Travel (VMT)
  - Divide number of measured by VMT (in 100's of millions) for each of most recent five years. Add together and divide by five for average.
  - Rounded to thousandth decimal place

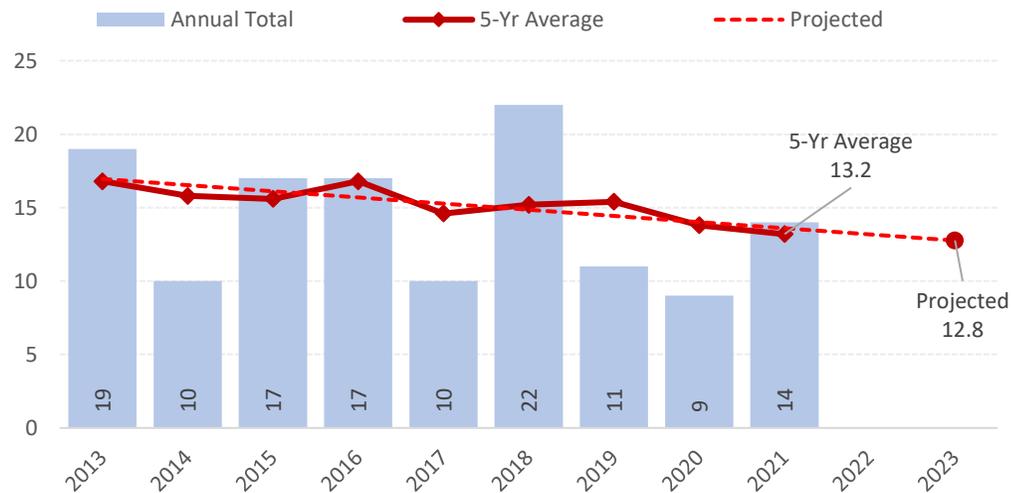
$$\begin{aligned} &135/129.03 + 95/129.70 + 114/130.94 + 136/134.76 + 102/136.81 = \\ &(1.046 + 0.732 + 0.871 + 1.009 + 0.746) / 5 = \\ &0.881 \text{ 5-Year Average Fatality Rate per 100 Million VMT} \end{aligned}$$

# Fatalities

**Figure 4: Statewide Fatalities  
2023 Projected**



**Figure 5: RPC Fatalities - 2023 Projected**



Year	Annual Crash Fatalities		5-Year Rolling Average Crash Fatalities		
	NH	MPO Region	5-Year Period	New Hampshire	MPO Region
2012	108	21			
2013	135	19	2009-2013	114.2	16.8
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

# Fatality Rate

Figure 7: Statewide Fatality Rate  
2023 Projected

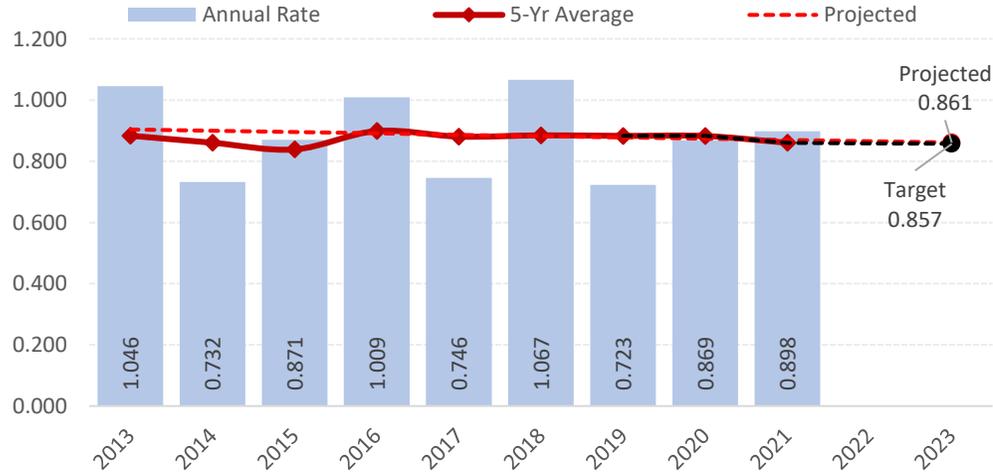
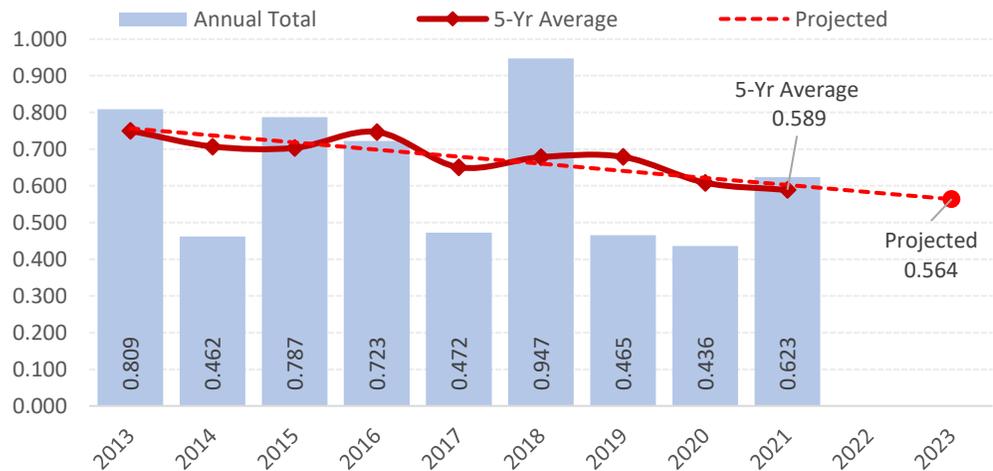


Figure 8: RPC Fatality Rate - 2023 Projected (per 100 Million VMT)



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
2012	128.94	22.05	0.838	0.952			
2013	129.03	23.48	1.046	0.809	2009-2013	0.884	0.750
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	<b>131.33</b>	<b>22.46</b>	<b>0.898</b>	<b>0.623</b>	2017-2021	<b>0.861</b>	<b>0.589</b>

# Serious Injuries

Figure 10: Statewide Serious Injuries  
2023 Projected

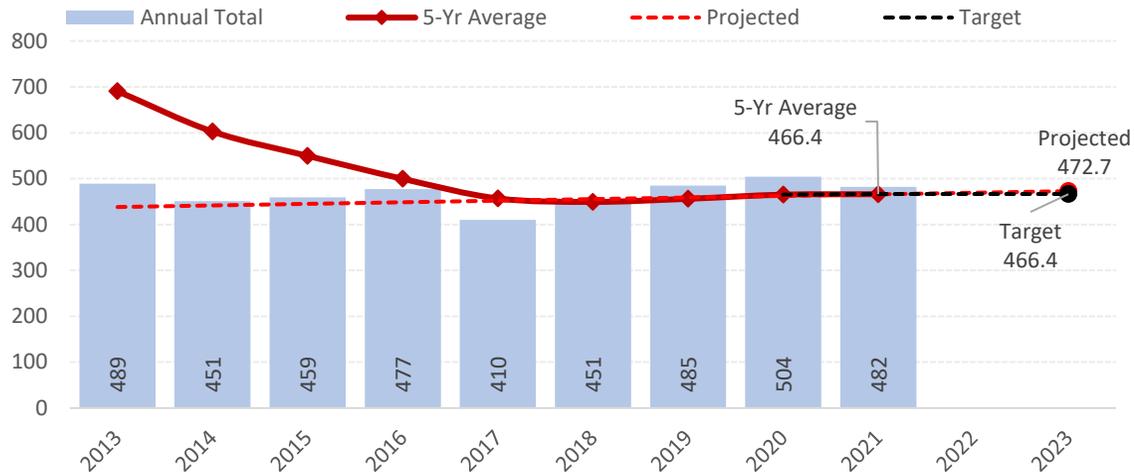
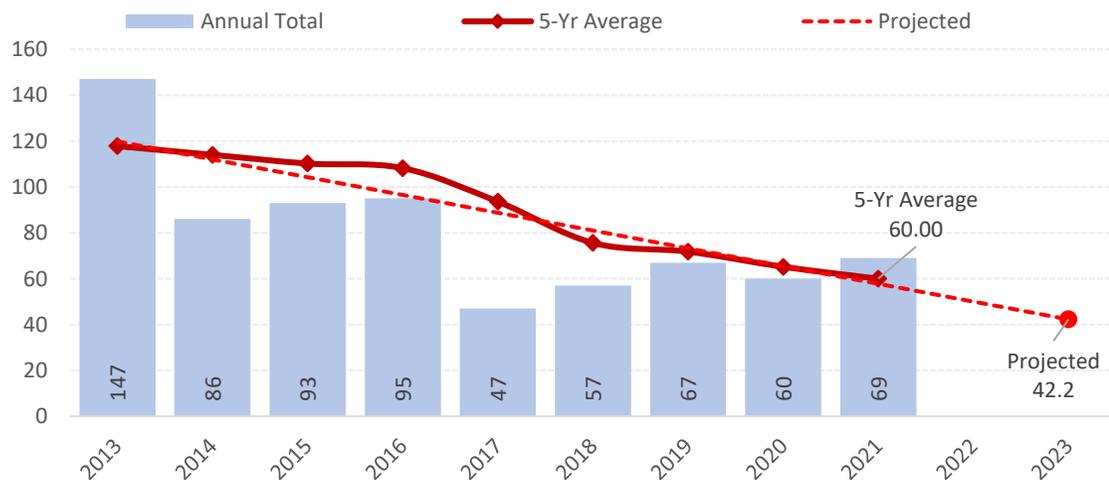


Figure 11: RPC Serious Injuries - 2023 Projected



	NH	MPO Region		5-Year Rolling Average Serious Injuries	
Year	Serious Injuries	Serious Injuries	5-Year Period	NH	MPO Region
2012	623	120			
2013	489	147	2009-2013	690.8	117.8
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	<b>482</b>	<b>69</b>	2017-2021	<b>466.4</b>	<b>60.0</b>

# Rate of Serious Injuries

Figure 13: Statewide Serious Injury Rate  
2023 Projected

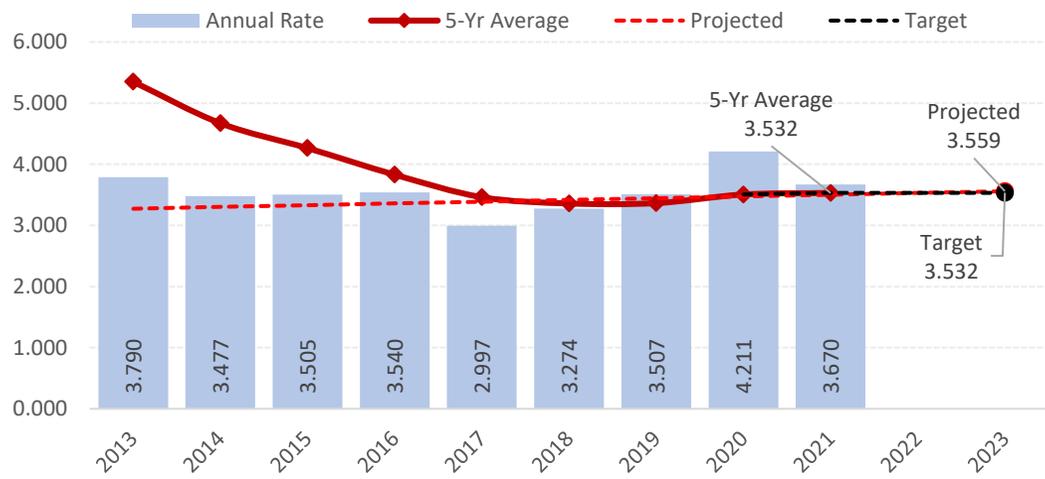
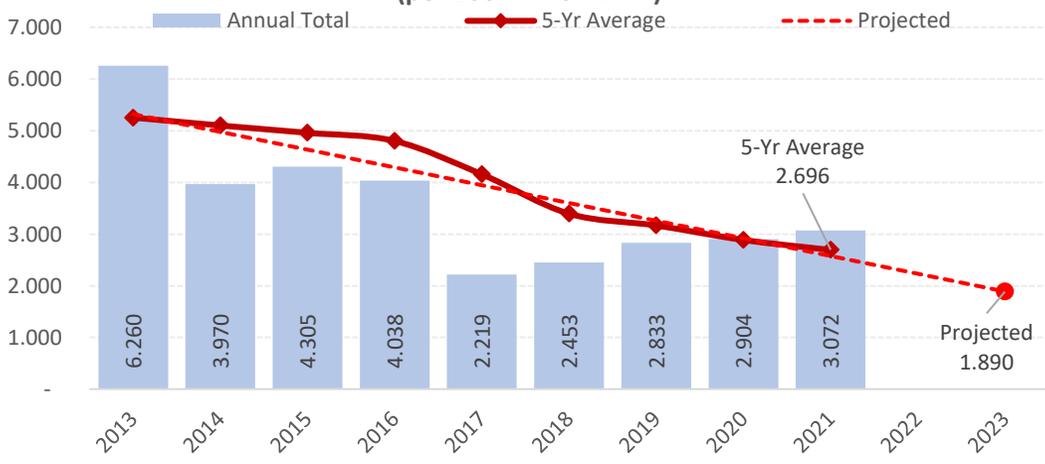


Figure 14: RPC Serious Injury Rate  
2023 Projected  
(per 100 Million VMT)



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
2012	128.94	22.05	4.832	5.442			
2013	129.03	23.48	3.790	6.260	2009-2013	5.349	5.255
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	<b>131.33</b>	<b>22.46</b>	<b>3.670</b>	<b>3.072</b>	<b>2017-2021</b>	<b>3.532</b>	<b>2.696</b>

# Non-Motorized Fatalities & Serious Injuries

Figure 16: Statewide Non-Motorized Fatalities & Serious Injuries - 2023 Projected

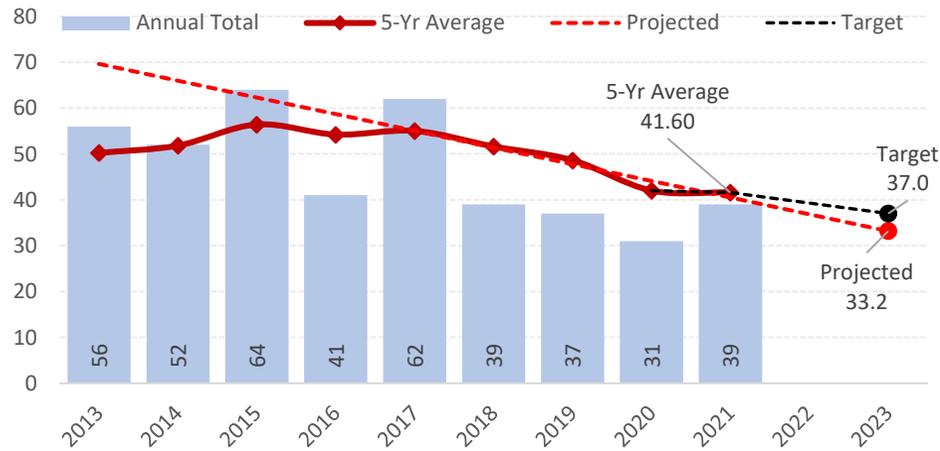
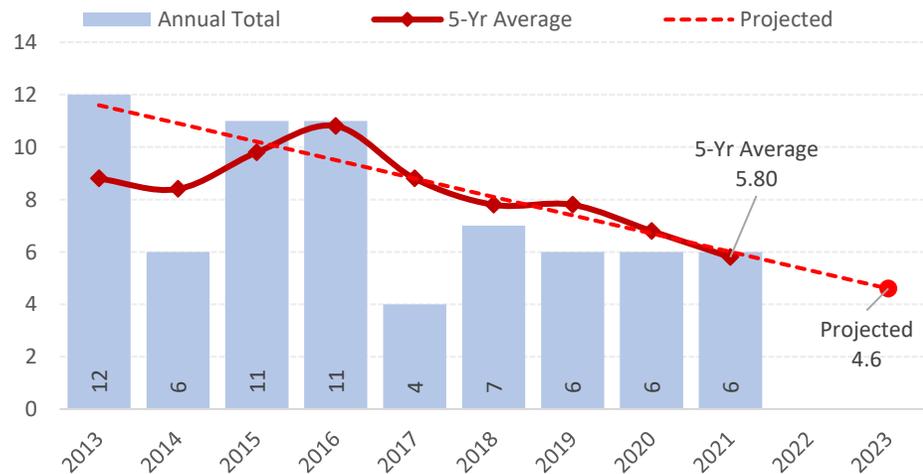


Figure 17: RPC Non-Motorized Fatalities & Serious Injuries 2023 Projected



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
2012	10	56	66	3	11	14			
2013	20	43	63	5	7	12	2009-2013	50.2	8.8
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

# Motorcycle Fatalities (MPO Only)

Figure 19: Statewide Motorcycle Fatalities - 2023 Projected

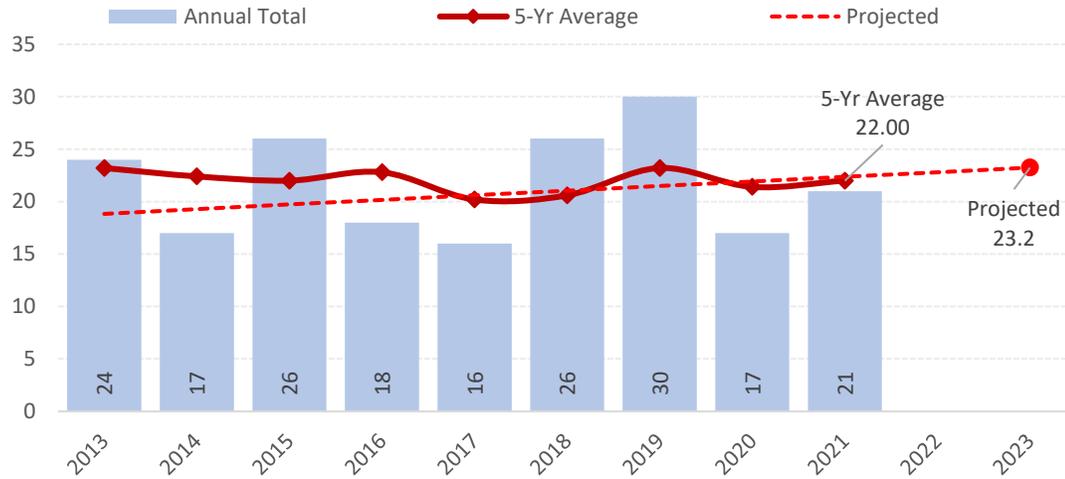


Figure 20: RPC Motorcycle Fatalities - 2023 Projected

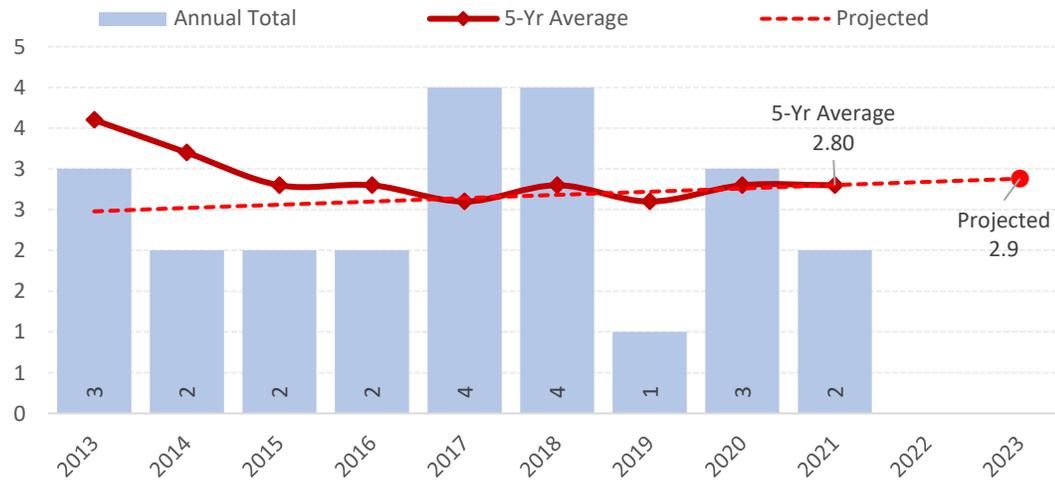


Table 8: Motorcycle Fatalities

Year	Annual Motorcycle Crash Fatalities		5-Year Period	5-Year Rolling Average Crash Fatalities	
	NH	MPO Region		NH	MPO Region
2012	32	4			
2013	24	3	2009-2013	24.40	3.60
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

# HSIP Targets for Calendar Year 2023

Measure	2021 Values		2023 Targets					2023 Target
	Yearly	Five-Year Average	Trend Based Target	New Hampshire		MPO Region		
				Current Trend	Desired Trend	Current Trend	Desired Trend	
Number of Fatalities	118	114.2	115.2					<b>111.6</b>
Fatality Rate per 100 Million VMT	0.898	0.861	0.861					<b>0.857</b>
Number of Serious Injuries	482	466.4	472.7					<b>466.4</b>
Serious Injury Rate per 100 Million VMT	3.670	3.532	3.559					<b>3.532</b>
Non-Motorized Fatalities and Serious Injuries	39	41.60	33.2					<b>37.0</b>
Motorcycle Fatalities (MPO Only)	2	2.80	2.90					<b>1.0</b>

# State HSIP Targets for Calendar Year 2023

- 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.
- Recommend MPO adopt MPO only target for Motorcycle Fatalities.

Measure	2021 Values		2023 Targets					2023 Target
	Yearly	Five-Year Average	Trend Based Target	New Hampshire		MPO Region		
				Current Trend	Desired Trend	Current Trend	Desired Trend	
Number of Fatalities	118	114.2	115.2	↘	↘	↘	↘	111.6
Fatality Rate per 100 Million VMT	0.898	0.861	0.861	→	↘	↘	↘	0.857
Number of Serious Injuries	482	466.4	472.7	→	↘	↘	↘	466.4
Serious Injury Rate per 100 Million VMT	3.670	3.532	3.559	→	↘	↘	↘	3.532
Non-Motorized Fatalities and Serious Injuries	39	41.60	33.2	↘	↘	↘	↘	37.0
Motorcycle Fatalities (MPO Only)	2	2.80	2.90	↗	↘	↗	↘	1.0