

# WSDOT Safety implementation plan

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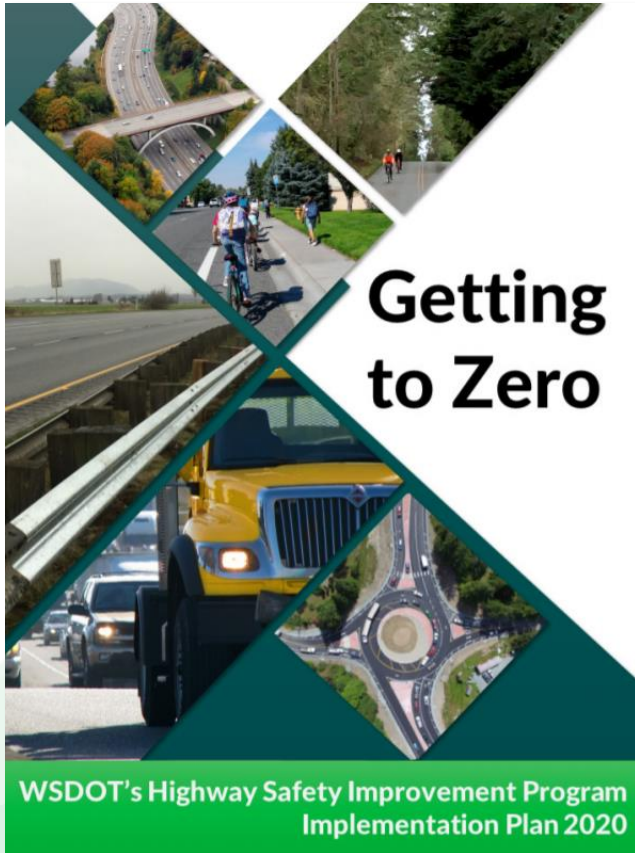
**State Safety Engineer**

**Washington State Department of Transportation**

**WTSC Commission Meeting**

**October 15, 2020**





## TODAY'S PRESENTATION

- Federal requirements
- WSDOT targets
- Societal cost versus WSDOT safety program spending
- Safety program structure
- Engineering emphasis areas
- Local versus state funding
- General program allocations

# FEDERAL REQUIREMENTS

- **WSDOT is required to set targets (three overlapping with WTSC)**
  - Fatalities, fatality rate, serious injuries
  - Collaborative process with MPOs and RTPOs
- **Penalty for failure to meet targets or make significant progress**
  - Implementation Plan
  - Required to obligate HSIP Funds



# TARGETS SET TO ACHIEVE “TARGET ZERO” BY 2030

WSDOT failed to meet targets and did not make significant progress.

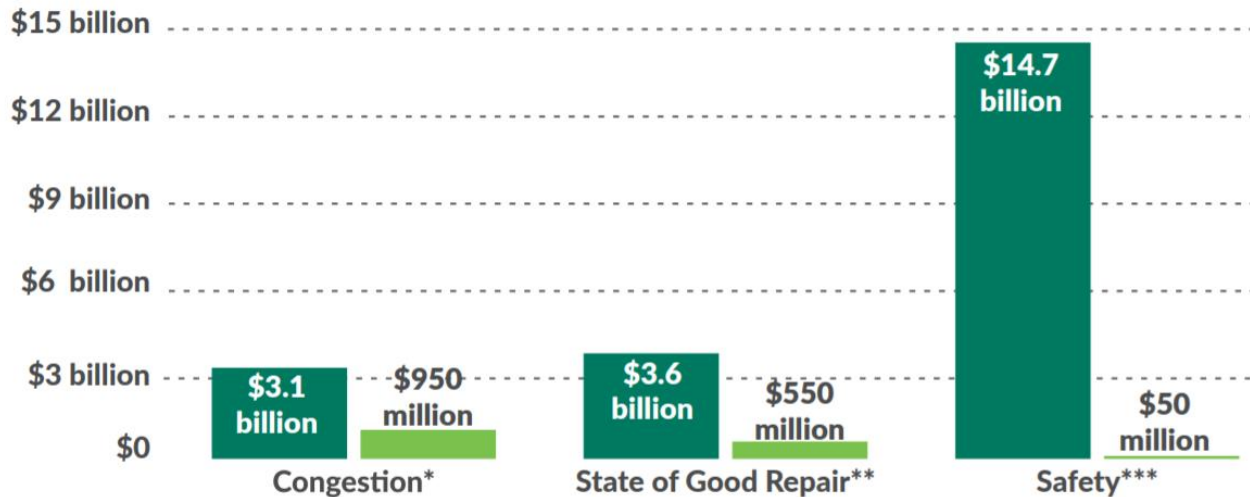


2012 through 2018

Performance Measure	2014-2018 Target	2014-2018 Outcome	2012-2016 Baseline	Target/ Baseline Met?	Significant Progress Made?
Number of fatalities	415.5	531.6	484.6	No/No	No
Rate of Fatalities per 100 million VMT on all public roads	0.709	0.880	0.826	No/No	
Number of serious injuries	1,788.0	2,154.6	2,087.4	No/No	
Rate of serious injuries per 100 million VMT on all public roads	3.058	3.560	3.566	No/Yes	
Number of non-motorized fatalities and serious injuries	431.4	559.4	504.2	No/No	

## SOCIETAL COST VERSUS SPENDING

For congestion, state of good repair and safety



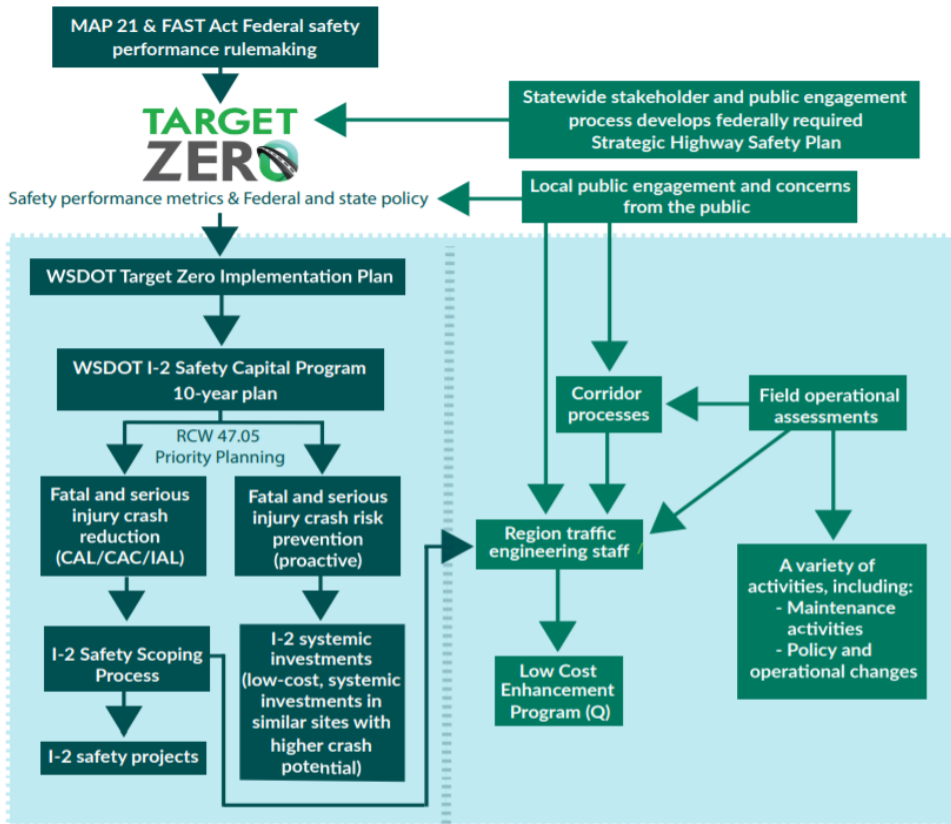
Notes and data sources: data from the 2020 State of Transportation Report: <https://wsdot.wa.gov/publications/fulltext/state-of-transportation/>

\*Congestion cost source: Texas Transportation Institute's 2015 Urban Mobility Scorecard; based on a value of travel delay and excess fuel consumption for the area from Everett to Tacoma.

\*\*State of Good Repair source: ASCE 2017 Infrastructure Report Card; estimated at \$656 for every Washington driver.

\*\*\*Safety source: Societal costs of crashes calculated using methods described in Crash Cost for Highway Safety Analysis (FHWA-SA-17-071), Chapter 6, Federal Highway Administration, Office of Safety 2018. Economic cost components include: medical care, emergency services, market productivity, household productivity, legal costs, insurance administrative costs, workplace costs, property damage and congestion.

## WSDOT SAFETY PROGRAM STRUCTURE







Priority Level and Emphasis Area		Fatalities <sup>1</sup>		Serious Injuries <sup>2</sup>	
		Number	%	Number	%
		1,650	100%	6,537	100%
<b>High Risk Behavior</b>					
1	Impairment	958	58.1%	1,215	18.6%
1	Distraction	502	30.4%	1,933	29.6%
1	Speeding	485	29.4%	1,579	24.2%
2	Unrestrained Occupants	312	18.9%	701	10.7%
<b>Crash Type</b>					
1	Lane Departure	796	48.2%	2,458	37.6%
1	Intersection Related	377	22.8%	2,256	34.5%
<b>Road Users</b>					
1	Young Drivers 16-25	512	31.0%	2,243	34.3%
2	Pedestrians and Bicyclists	329	19.9%	1,333	20.4%
2	Motorcyclists	236	14.3%	1,209	18.5%
2	Older Drivers 70+	223	13.5%	599	9.2%
2	Heavy Trucks	178	10.8%	442	6.8%
<b>Decision and Performance Improvement</b>					
1	Traffic Data Systems				
1	EMS and Trauma Care Systems				
1	Evaluation and Diagnostics				
1	Safe Systems				
1	Cooperative Automated Transportation, including Autonomous Vehicles				

# TARGET ZERO – WSDOT Emphasis Areas by Crash Type and Road Users

Target Zero emphasis areas; Washington state; 2015-2019; By number and percentage

Facility Type	All public roadways	Local jurisdiction	WSDOT jurisdiction
Total fatal and serious injury crashes	12,068	7,987	4,081
% of total fatal and serious injury crashes	100%	66.20%	33.80%
<b>Crash types (by number)</b>			
Lane departure	4,454	2,672	1,782
Run off the road	3,513	2,173	1,340
Opposite direction	1,866	1,129	737
Intersection related	3,677	3,068	609
<b>Crashes involving specific user types (by number)</b>			
Involving people walking or cycling	2,954	2,461	493
Involving people walking	2,275	1,855	420
Involving people cycling	689	615	74
Involving motorcyclists	2,297	1,449	848
Involving heavy trucks	822	326	496
<b>Crash types (by percentage)</b>			
Lane departure	36.9%	22.1%	14.8%
Run off the road	29.1%	18.0%	11.1%
Opposite direction	15.5%	9.4%	6.1%
Intersection related	30.5%	25.4%	5.0%
<b>Crashes involving specific user types (by percentage)</b>			
Involving people walking or cycling	24.5%	20.4%	4.1%
Involving people walking	18.9%	15.4%	3.5%
Involving people cycling	5.7%	5.1%	0.6%
Involving motorcyclists	19.0%	12.0%	7.0%
Involving heavy trucks	6.8%	2.7%	4.1%
Source: WSDOT Engineering Crash Data Mart, snapshot 5/16/2020.			

# BY LOCAL AND WSDOT JURISDICTION SHOWING THE NUMBER AND PERCENT DIFFERENCES IN CRASHES



## ALLOCATION AND FUNDING SPLIT

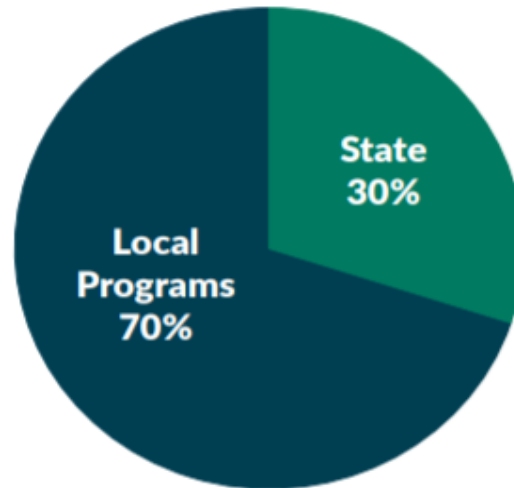
### Allocation of 2019-2021 HSIP funding

Federal Fiscal Years 2020 and 2019

	Total	State	Local Programs
FFY 2020	\$40,477,044	\$12,143,113	\$28,333,931
FFY 2019	\$39,831,497	\$11,949,449	\$27,882,048

### HSIP Funding Split

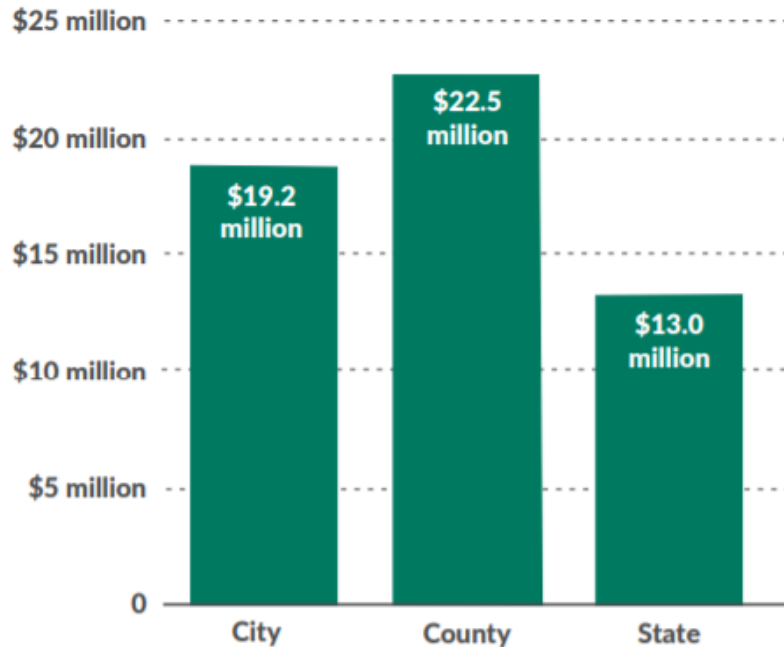
Federal Fiscal Year 2020



## 2021 OBLIGATIONS BY JURISDICTION AND EMPHASIS AREA

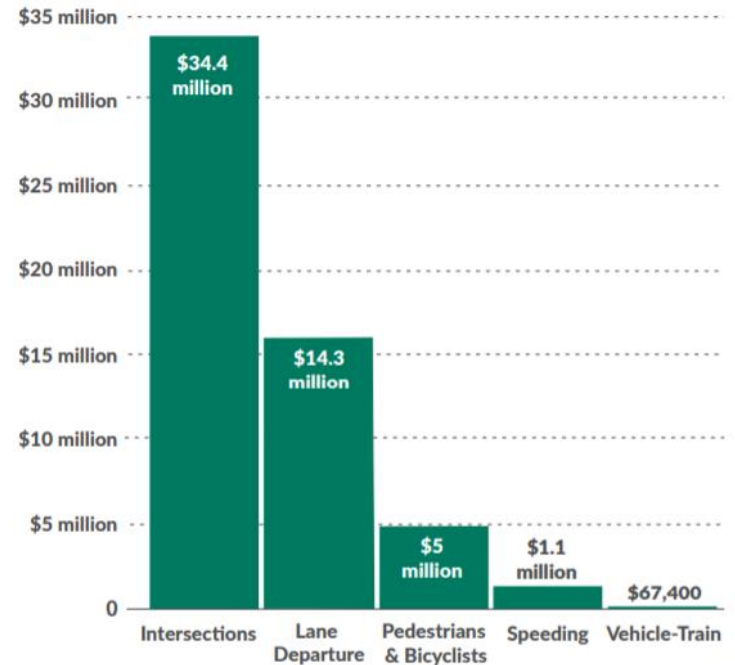
Safety Program Funding Distribution by Jurisdiction Type

Anticipated obligations for Federal Fiscal Year 2021



Expected Safety Program Funding Obligations by Emphasis Area

Federal Fiscal Year 2021



# GENERAL PROGRAM ALLOCATIONS

City	County
Intersections (61%)	Lane Departure (74%)
Signal Operations/Visibility	Guardrail
Roundabouts	High Friction Surface
Traffic Signals	Signing
Signing	Clear Zone Improvements
	Flatten Slopes
<b>Pedestrians (28%)</b>	<b>Intersections (22%)</b>
Road Diets	Roundabouts
Rapid Flashing Beacons	Traffic Signals
Pedestrian Hybrid Beacons	Signal Operations/Visibility
Traffic Calming	Signing
Lead Pedestrian Intervals	
<b>Lane Departure (10%)</b>	<b>Pedestrians (2%)</b>
Guardrail	<b>Data Improvement (2%)</b>
High Friction Surface	<b>Speeding (1%)</b>

## State

<b>Subcategory: Crash Reduction (ID)</b>
CAL/CAC
IAL
<b>Subcategory: Crash Prevention (IE)</b>
Intersections - 15%
Intersection Systemic Safety (angle/high speed) (Compact Roundabouts)
Lane Departure- (run-off-the-road + opposite direction) - 15%
Rumble Strips
High Friction Surface Treatments
Horizontal Curves
Roadside Safety Hardware - 15%
Redirectional landforms
BCT - Interstate
BCT - Non Interstate
Cable Barrier
Guardrail infill
Corridors - 5%
Field Assessment
High Visibility Markings
Vulnerable Users - 15%
Pedestrian and Bike (active transportation)
Motorcycle
Decision Making & Performance Improvement - 5%
MIRE FDE
AASHTO Highway Safety Manual Predictive Method Tools
AASHTOWare SafetyAnalyst™
MPO/WTSC Planning/Target Setting

# TARGET ZERO



**Subcategory: Crash Prevention (IE)**



## **SUMMARY**

- Target Zero is WSDOT guide
- Achieving target zero is a daunting task
- Funding is limited and we are working to maximize our return on investment
- The 5<sup>th</sup> E of safety (Evaluation, analysis and diagnosis) leads to improved outcomes
- We are stronger in partnership
- Are actions bring our families and friends home safely

# QUESTIONS?

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**TARGET  
ZERO** 