

Appendix A: Acronyms

Target Zero contains many acronyms for agencies, organizations, special programs, and other elements of traffic safety. One purpose of Target Zero is to create a common language for traffic safety practitioners in Washington State. This acronym list will help practitioners easily familiarize themselves with the acronyms used by the diverse groups — educators, engineers, law enforcement officers, academics, and many others — who are attempting to reduce traffic fatalities and serious injuries in our state.

AAA	American Automobile Association
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ABACCL	American Bar Association Center on Children and the Law
ADA	Americans with Disabilities Act
AI/AN	American Indians and Alaskan Natives
AOC	Washington Administrative Office of the Courts
ARIDE	Advanced Roadside Impaired Driving Enforcement
AWC	The Association of Washington Cities
BAC	Blood Alcohol Content
BIA	Bureau of Indian Affairs
CDC	Centers for Disease Control and Prevention
CDL	Commercial Driver License
CFR	Code of Federal Regulations
CLAS	Collision Location & Analysis System
CMF	Crash Modification Factor
CMV	Commercial Motor Vehicle
CPS	Washington's Child Passenger Safety program
CRAB	County Road Administration Board
CTW	Countermeasures That Work
CVD	Commercial Vehicle Division

CVEB	Commercial Vehicle Enforcement Bureau
DADSS	Driver Alcohol Detection System for Safety
DDACTS	Data-Driven Approaches to Crime and Traffic Safety
DOH	Washington State Department of Health
DRE	Drug Recognition Expert
DUI	Driving Under the Influence
DWI	Driving While Intoxicated (term used in some other states, but not in WA)
EMS	Emergency Medical Services
eTRIP	Electronic Ticketing and Collision Reporting Program
EWU	Eastern Washington University
FARS	Fatality Analysis Reporting System
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
GHSA	Governors Highway Safety Association
GVWR	Gross vehicle weight rating
HFST	High Friction Surface Treatment
HPMS	Highway Performance Monitoring System
HRRR	High Risk Rural Roads
HSIP	Highway Safety Improvement Program
HSM	Highway Safety Manual
HVE	High Visibility Enforcement

IIHS	Insurance Institute for Highway Safety
ITS	Intelligent Transportation Systems
IVIS	In-Vehicle Information Systems
LDTL	Let's Draw the Line between Youth and Alcohol
LIT	A strategy supported by extensive literature but lacks a metastudy
LTAP	Local Technical Assistance Program
LTCCS	Large Truck Crash Causation Study
MADD	Mothers Against Drunk Driving
MAP-21	Moving Ahead for Progress in the 21st Century Act
META	A strategy supported with published, favorable outcomes in the form of a metastudy (a review of several related studies for methodological strength and consistent outcomes)
MPH	Miles per Hour
MUTCD	Manual on Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials
NATEO	The Northwest Association of Tribal Law Enforcement Officers
NCHRP	National Cooperative Highway Research Program
NCSC	National Center for State Courts
NHTSA	National Highway Traffic Safety Administration
NTSB	National Transportation Safety Board
NW TTAP	Northwest Tribal Transportation Assistance Program
OSPI	Office of Superintendent of Public Instruction
PIP	Party Intervention Patrol
PTCR	Police Traffic Collision Report
RAND	Research and Development
RCW	Revised Code of Washington
RUaD	Washington State Coalition to Reduce Underage Drinking
SECTOR	Statewide Electronic Collision and Ticket Online Records system
SDOT	Seattle Department of Transportation

SFST	Standardized Field Sobriety Tests
SHSP	Strategic Highway Safety Plan
SMC	Seattle Municipal Court
SRTS	Safe Routes to Schools
TACT	Ticket Aggressive Cars and Trucks
TEA	Target Enforcement Area
THC	Tetrahydrocannabinol
TRC	Traffic Records Committee
TTPO	Tribal Transportation Planning Organization
TZM	Target Zero Manager
TZT	Target Zero Teams
USC	Code of Laws of the United States of America
USDOT	United States Department of Transportation
UTC	Utilities and Transportation Commission
UW	University of Washington
V2I	Vehicle-to-Infrastructure communications
V2V	Vehicle-to-Vehicle communications
VMT	Vehicle Miles Traveled
WASPC	Washington State Association of Sheriffs & Police Chiefs
WEMISIS	Washington EMS Information System
WIDAC	Washington's Impaired Driving Advisory Council
WITPAC	The Washington Indian Transportation Policy Advisory Committee
WLCB	Washington Liquor and Cannabis Board
WSAC	Washington State Association of Counties
WSDOT	Washington State Department of Transportation
WSP	Washington State Patrol
WTA	Washington Trucking Association
WTR	Washington Trauma Registry
WTSC	Washington Traffic Safety Commission

Appendix B: Glossary

Target Zero contains many specialized terms related to traffic safety in Washington State. One purpose of Target Zero is to create a common language for traffic safety practitioners in Washington State. This glossary is intended to help explain the meanings of specific terms used by the diverse groups — educators, engineers, law enforcement officers, academics, and many others — who are attempting to reduce traffic fatalities and serious injuries in our state.

Alcohol-impaired Driver

Any driver with a BAC of .08 or higher.

Blood Alcohol Concentration

BAC is measured as a percentage by weight of alcohol in the blood (grams/deciliter). A positive BAC level (0 .01 g/dl and higher) indicates that alcohol was consumed by the person tested. A BAC level of 0.08 g/dl or more indicates that the person was intoxicated.

Contributing Circumstance

An element or driving action that, in the reporting officer's opinion, best describes the main cause of the collision. First, second, and third contributing causes are collected for each motor vehicle driver, bicyclist, and pedestrian involved in the collision.

Crash

An unintended event that causes a death, injury, or property damage, and involves at least one motor vehicle or bicyclist on a public roadway.

Death Certificate Records

Department of Health manages all of Washington's vital statistics, including death events. Death certificates include information about the primary and underlying causes of death as determined by medical examiners and coroners. This information is used to reconcile deaths involving traffic collisions to determine if the death was traffic-related (death as a result of injuries sustained in a collision) or non-traffic-related (death occurs and then the collision occurs, such as a heart attack while driving).

Distracted Driver

Any driver with the following attributes as recorded by the investigating officer: looked but did not see; distracted by vehicle occupant or object; while using a cell phone (talking, listening, dialing, etc.); adjusting vehicle controls; distracted by object/person outside the vehicle; eating, drinking, or smoking; emotional or lost in thought; other or unknown distraction.

Driving under the influence (DUI) (legal definition)

In Washington State, a person is guilty of driving while under the influence of intoxicating liquor, marijuana, or any drug if the person drives a vehicle within this state and:

- Has, within two hours after driving, an alcohol concentration of .08 or higher as shown by analysis of the person's breath or blood made under RCW 46.61.506; or
- Has, within two hours after driving, a THC concentration of 5.00 or higher as shown by analysis of the person's blood made under RCW 46.61.506; or
- Is under the influence of or affected by intoxicating liquor, marijuana, or any drug; or
- Is under the combined influence of or affected by intoxicating liquor, marijuana, and any drug.

Electronic Traffic Information Processing (eTRIP) Initiative

A collaborative effort among state and local agencies to create a seamless and integrated system through which traffic-related information can travel from its point of origin to its end use and analysis. The intent of this undertaking is to move from the current paper-based process to an automated system that will enable law enforcement agencies to electronically create tickets and crash reports in the field and transmit this data to state repositories and authorized users.

Fatality

A person who died within 30 days of a crash as a result of injuries sustained in the collision.

Fatality Analysis Reporting System (FARS)

A database system containing data on a census of fatal traffic crashes within the 50 states, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway customarily open to the public and result in the death of a person (occupant of a vehicle or a non-occupant) within 30 days of the crash. FARS collects information on over 100 different coded data elements that characterize the crash, the vehicle, and the people involved.

Fatality Rate

Number of deaths resulting from reportable crash for a specified segment of public roadway per 100 million vehicle miles of travel or per 100,000 people.

Heavy Truck

1. Any vehicle with a trailer classified at gross vehicle weight rating (GVWR) of 10,001 lbs. or more, a single vehicle with GVWR of 26,001 lbs. or more, or a single vehicle of 26,000 lbs. or less that is commercial driver license (CDL)-required, or a commercial vehicle supplement to the collision report.
2. A vehicle type of truck and trailer, truck tractor, truck tractor and semi-trailer, or truck-double trailer combinations.
3. A vehicle usage classification of concrete mixer, dump truck, logging truck, refuse/recycle truck, van over 10,001 lbs., tanker truck, or auto carrier.

Impaired Driver

Any driver with a BAC of .08 or greater and/or any driver with a positive result on a drug test or through an investigating officer or drug recognition expert (DRE) assessment of impairment.

Impairment Related Collision

Any driver, pedestrian, bicyclist, etc., with a BAC of .08 or greater and/or a positive result on a drug test.

Licensed Driver

A person who is licensed by any state, province, or other governmental entity to operate a motor vehicle on public roadways.

Motor Vehicle

Any motorized device in, upon, or by which any person or property is or may be transported or drawn upon a public roadway, excepting devices used exclusively upon stationary rails or tracks. This includes every motorized vehicle that is self-propelled or propelled by electric power (excluding motorized wheelchairs), including that obtained from overhead trolley wires but not operated on rails.

Non-motorist

Any person who is not an occupant of a motor vehicle in transport and includes the following:

4. Pedestrians
5. Bicyclists, tricyclists, and unicyclists
6. Occupants of parked motor vehicles
7. Others such as people riding on animals and persons riding in animal-drawn conveyances

Passenger

Any occupant of a motor vehicle who is not a driver.

Pedestrian

Any person not in or upon a motor vehicle or other vehicle but includes persons on personal conveyance devices, such as skateboards or wheelchairs.

Per se Alcohol Limit

No further proof is needed. When a person is found to have, within two hours after driving, an alcohol concentration of .08 or higher or a THC concentration of 5.00 nanograms per milliliter of blood or higher, that person is guilty “per se” of driving under the influence.

Restraint

A device such as a seatbelt, shoulder belt, booster seat, or child seat used to hold the occupant of a motor vehicle in the seat at all times while the vehicle is in motion.

Rural

All areas, incorporated and unincorporated, with a population of less than 5,000.

Serious Injury

Any injury other than a fatal injury that prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred. This definition applies to traffic crash data only. This is not the legal definition or medical definition of serious injury.

Speeding

Speeding occurs when drivers travel above the posted speed limit or too fast for conditions. Drivers may be traveling well under the posted speed limit, but may be considered speeding when weather conditions such as icy roads or poor visibility such as fog may cause drivers to lose control of their vehicles or increase normal stopping distance.

Trauma

A major single or major multiple injury requiring immediate medical or surgical intervention or treatment to prevent death or permanent disability.

Urban

Any incorporated area with a population of over 5,000.

Vehicle Miles Traveled (VMT)

The number of miles traveled annually by motor vehicles.

Work Zone

Any activity involving construction, maintenance, or utility work on or in the immediate vicinity of a public roadway. A work zone may be active (workers present) or inactive.

Young Driver Involved

A driver age 16–25 involved in a fatal or serious injury collision. Involvement does not indicate fault.

Appendix C: Methodologies

This appendix explains the methodology we used in developing the Target Zero serious injury and fatality data. For information on the sources of data, please see Appendix D: Target Zero Data Sources.

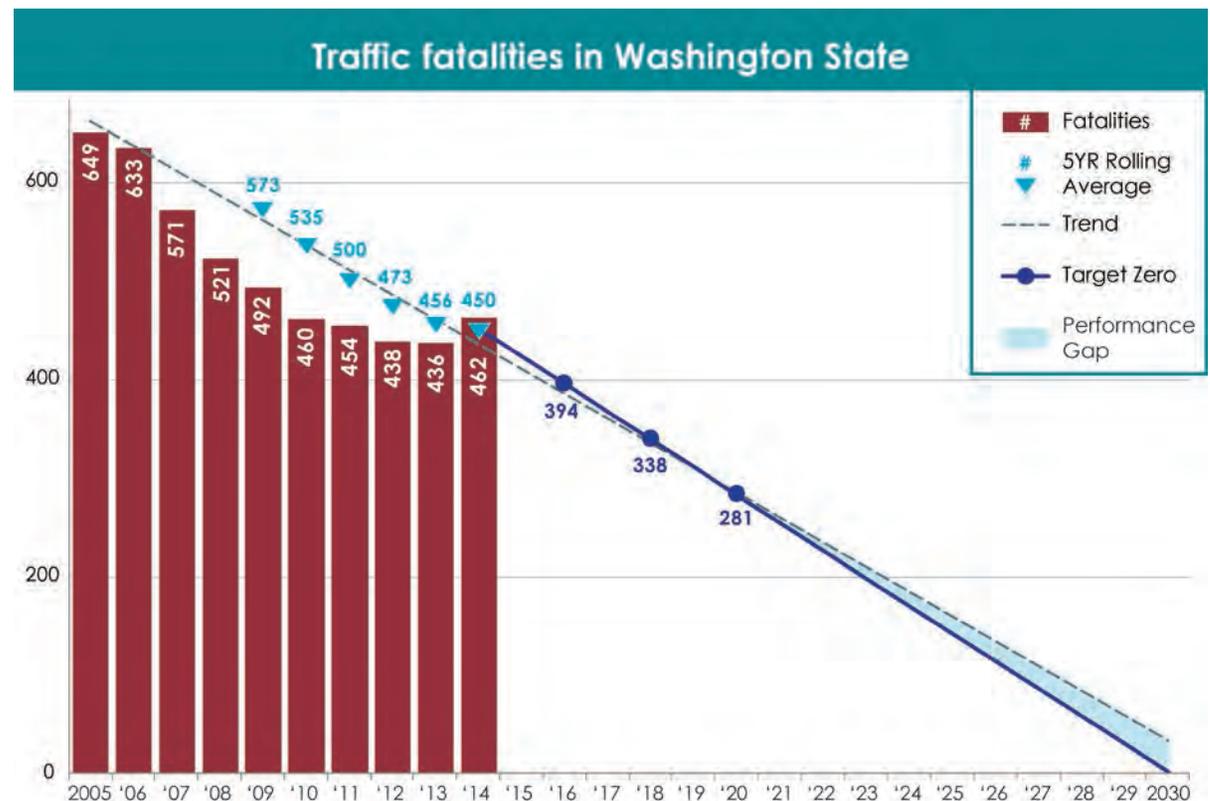
Five-year rolling averages and the performance trend line

Washington State formed its Target Zero vision in 2000: zero deaths and serious injuries by 2030. This edition of Target Zero provides the most recent ten years of traffic fatality and serious injury data for our state.

The vision of zero by 2030 itself is a linear concept: a direct relationship between the two variables of fatalities and time (or of serious injuries and time) converging at zero in 2030. Therefore, it makes sense to use a linear measure of progress to compare with a linear goal. The trend line may indicate a declining, flat, or increasing trend, depending on the average change among the series of five-year rolling averages.

Each average contributes equally to the average change driving the direction of the trend. The five-year rolling averages smooth the effect a single year fluctuation would have on a linear trend. The most recent ten years of data presented in this edition result in six five-year rolling averages on which the performance trend is based. Data years 2005–2014, represented by the blue triangles on the graph, result in rolling averages of 2005–2009, 2006–2010, 2007–2011, 2008–2012, 2009–2013, and 2010–2014.

Trend lines represent a future projection assuming all variation, fluctuation, and preventive measures stay at historic and current levels. In practice, by continuously implementing new strategies and enhancing and maintaining existing strategies, we can drive the trend downward, closer to the overall goal of zero by 2030.



The Target Zero goal line

For this edition of Target Zero, we projected fatality and serious injury trend charts out to the year 2030. This approach allows us to measure incremental progress within the entire 2030 timeframe and see what's required to reach zero by 2030. The Target Zero goal line is simply a straight line to zero in 2030, starting from the most recent five-year average (2010–2014). Using the five-year average helps mitigate the skewing effect any single year might have on our progress toward zero.

While the exact values of the Target Zero goal line may serve as annual targets for reaching zero, we can make more accurate assessments of progress when we group and compare several years of data.

The performance gap

The solid line on the graph represents the Target Zero line — the downward trend needed to reach zero by 2030. The performance gap is the space between the Target Zero goal line and the trend line projected from the five-year rolling averages. The trend charts show this performance gap in a light blue color.

Some Target Zero graphs do not show a gap, because the trend actually goes to zero before 2030.

The performance gap may also be used as a monitoring tool. For example, if the performance gap is smaller in 2015 and grows on its way to 2030, it indicates we not only need a greater decrease in overall counts, but also a greater average annual decline than we have had. This type of gap represents areas in need of new and expanded strategies. However, if the gap is of similar width in 2015 as it is in 2030, then we have achieved the necessary average annual decline, but need an immediate downward drive in annual counts to close the gap.

Fatality and serious injury rates

We reference rates in some chapters of this Target Zero edition. There are three types of rates in our analysis:

1. Rates based on vehicle miles traveled (VMT)
2. Rates based on population
3. Rates based on registered or endorsed drivers

The most common rates used in traffic safety statistics are the number of fatalities or serious injuries per 100 million VMT. These rates represent the measure of risk for traffic deaths or serious injuries based on estimated annual traffic volume. VMT is available for state, county, rural, and urban classifications (see Appendix D for more information on VMT).

Rates of fatalities and serious injuries specific to population subgroups, such as racial/ethnic and age-specific groups, are calculated per 100,000 people. Comparisons of these population rates enable identification of high risk groups. Such groups may be at higher risk for traffic death or serious injury than other population subgroups, as is the case with older drivers, younger drivers, and American Indians and Alaskan Natives.

Some rates are presented based on the number of licensed or endorsed drivers. These rates are similar to VMT rates, but represent a measure of risk of traffic death or serious injury based on the estimated number of drivers. The rates are useful when comparing different categories of drivers, such as motorcyclists.

As we get closer to zero fatalities and serious injuries, it gets harder to affect the trends

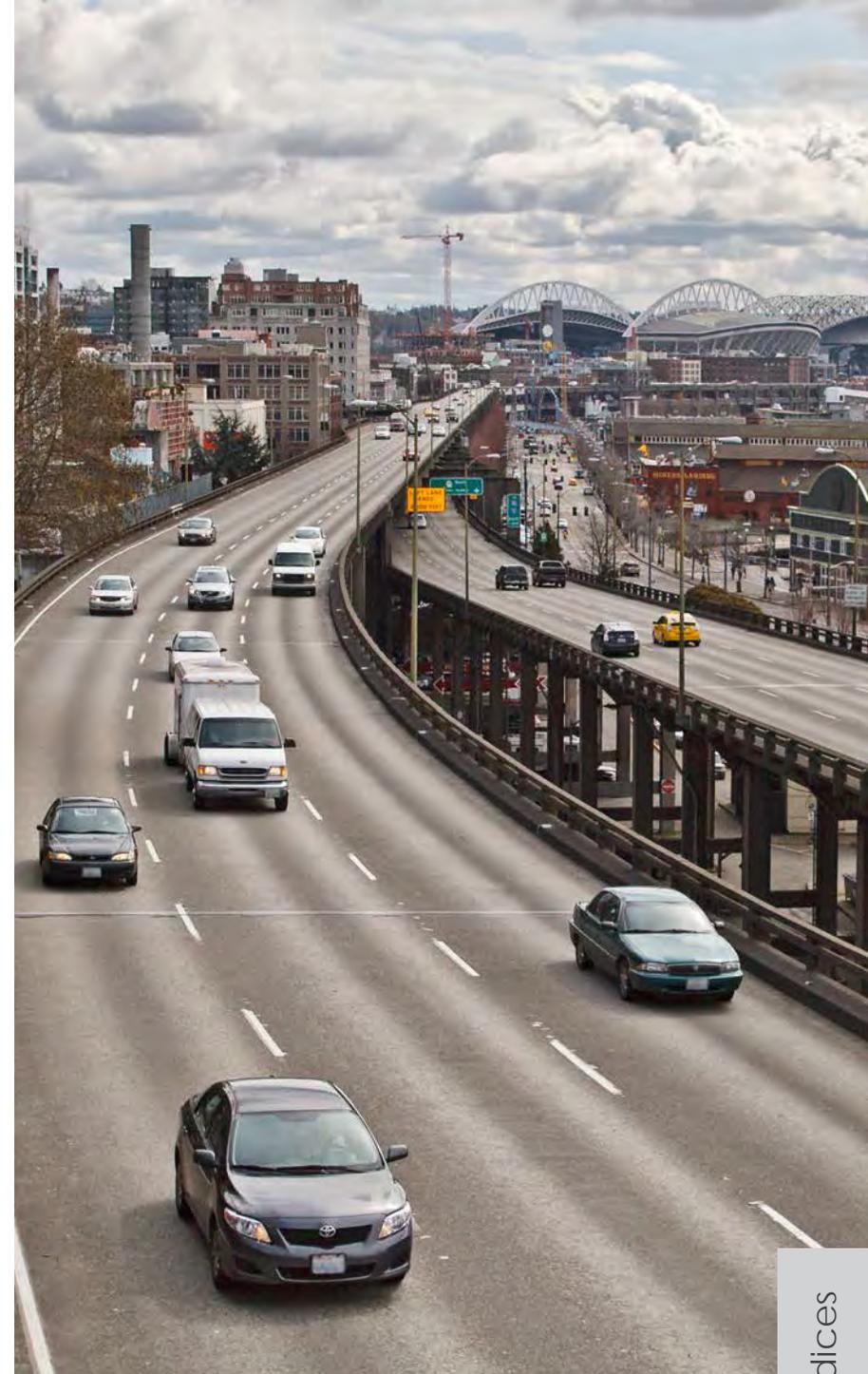
The traffic safety community recognizes there are factors related to traffic deaths and serious injuries outside the reach of listed strategies. Additionally, we recognize most strategies have immediate benefits that level off. As we look to the future, we also realize that as overall fatal and serious injury counts are driven downward, it will be harder to meet average annual reduction goals.

These recognitions are particularly true related to affecting fatality and serious injury trends among the more isolated, higher risk, and/or less receptive members of Washington's population.

As linear trends flatten and we get closer to 2030, we will need more sophisticated statistical methods to monitor and predict outcomes. Our challenge is to continue to accurately identify and monitor these changing trends, and keep ahead of them with new and expanded strategies.

The factors contributing to traffic fatalities and serious injuries are an intimate web of environmental, behavioral, and vehicular factors. Some factors are related to the triggering of the event, while others are related to the severity of the event. Using various facets of enforcement, education, engineering, emergency medical services, and evaluation, we will continue to prevent these crashes from happening in the first place, and to mitigate the harm incurred when they do happen.

While we may not be able to prevent all crashes, we can eliminate those that result in deaths and serious injuries, our vision for Washington State.



Appendix D: Target Zero data sources

To develop the data that drives Target Zero, practitioners draw data from multiple sources in Washington State. This appendix describes those sources.

The Fatality Analysis Reporting System

The Fatality Analysis Reporting System (FARS) is the source of Target Zero's fatality data. The Washington Traffic Safety Commission (WTSC) contracts with the National Highway Traffic Safety Administration (NHTSA) to provide FARS data for Washington State. FARS is a nationwide census of traffic fatalities that characterizes the crash, the vehicles, and the people involved in each reported fatal crash. FARS contains more than 100 coded data elements that are collected from official documents, including Police Traffic Crash Reports (PTCR), state driver licensing and vehicle registration files, death certificates, toxicology reports, and emergency medical services (EMS) reports.

To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway that is customarily open to the public, and result in the death of a person (either an occupant of a vehicle or a non-motorist) within 30 days of the crash. For more information about the parameters in FARS traffic fatality counts, visit WTSC's [Research and Data Division](#) page.

The collision locator analysis system

The collision location & analysis system (CLAS), a crash data repository, is the source of Target Zero's serious injury data. CLAS is housed at WSDOT. Most of the data in CLAS comes from law enforcement officers via the PTCR. Citizens may also submit non-police assisted reports of crash events via the Vehicle Collision Report.

CLAS stores all reportable traffic crash data for Washington State public roadways. A crash needs to meet at least one of the two following criteria to be considered "reportable": 1) a minimum property

damage threshold of \$1,000, and/or 2) bodily injury occurred as a result of the crash.

Target Zero uses CLAS crash data for counts of seriously injured people. However, there are sections within Target Zero that also use CLAS crash information for deriving counts of fatally injured people through record merging with FARS. Those sections are Lane Departure and Intersection. CLAS crash data were also used to reconcile jurisdictional assignment in FARS for road type/jurisdiction analysis.

It is widely acknowledged that serious injury classifications assigned by investigating officers are not as accurate as injury severity derived from health records. The serious injury data presented in this edition of Target Zero is classified by the investigating officer at the scene. However, Washington's Traffic Records Committee is making progress on a collaborative, multiagency effort to get more accurate injury severity data, particularly for serious injury crashes. For more information about the efforts of the Traffic Records Committee (TRC), see the Traffic Data Systems chapter.

Vehicle Miles Traveled estimates

Vehicle Miles Traveled (VMT) is a measure of the total number of miles traveled by all vehicles over a segment of road over a specific period of time, usually either a day or a year. WSDOT collects and reports several different types of road and street data to the Federal Highway Performance Monitoring System (HPMS) each year. WSDOT collects traffic data for state highways and relies on local jurisdictions to provide traffic data for their roads and streets.

VMT is calculated as follows:

$VMT = (\text{length of road segment}) \times (\text{the Average Annual Daily Traffic [AADT] traveling on that road segment})$

The total VMT for a highway network or region is a summation of VMT for all segments of roads that make up the network or region. Statewide VMT is a summation of all segments of road statewide.

Department of Licensing driver record data

The Washington State Department of Licensing (DOL) provides the driver record data used in Target Zero from their Drivers Data Mart database. This data is updated daily from several sources, and contains the complete driver records for all Washington drivers.

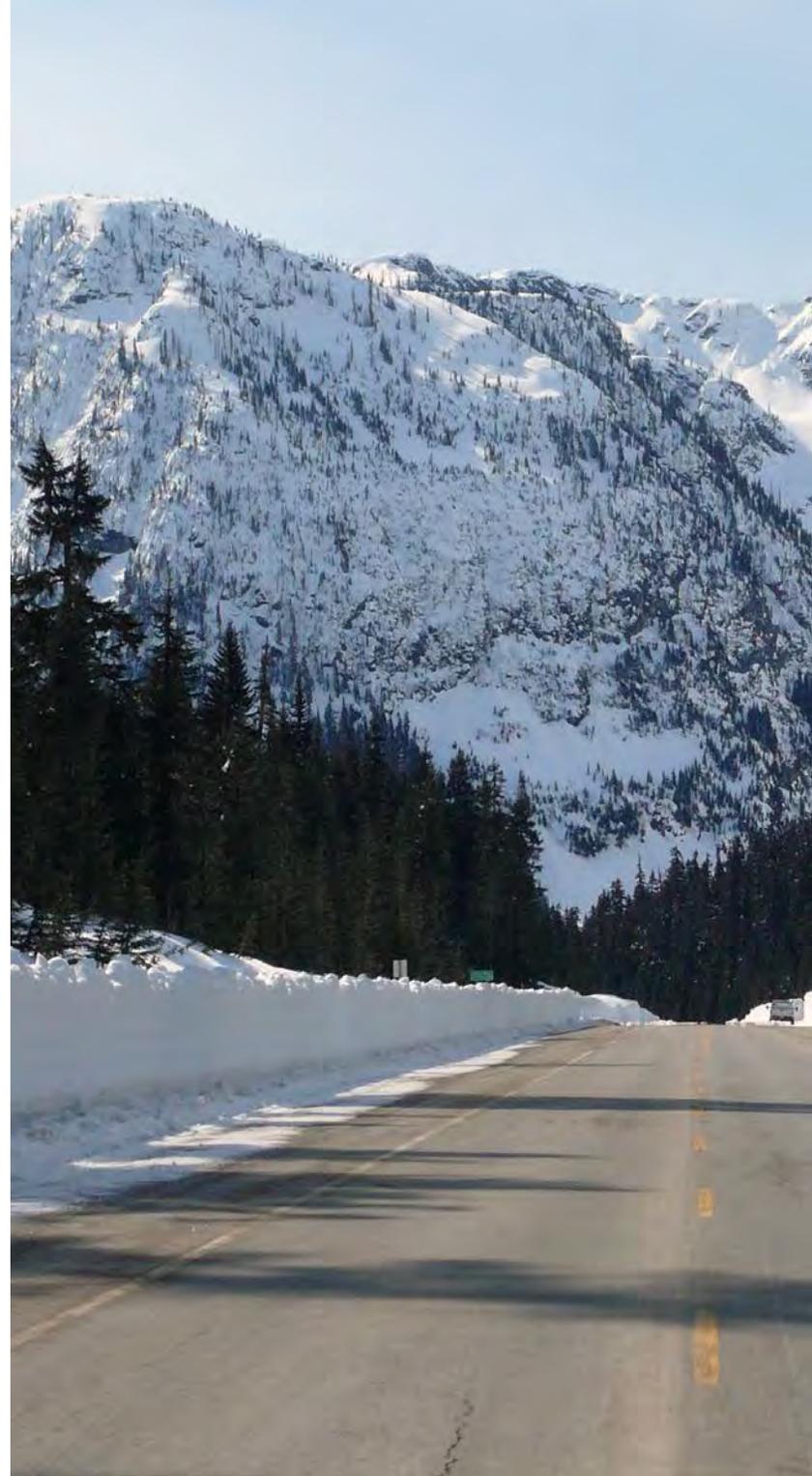
Administrative Office of the Courts citation data

Washington Administrative Office of the Courts (AOC) provides court and citation data, which includes enforcement and court processing. For example, AOC collects the number of texting while driving citations when they are filed with the court.

Data gaps exist, which Target Zero partners address, such as tracking a single DUI case through the myriad of internal and external data systems that the information passes through. The AOC actively participates in the Traffic Records Committee and is working to identify and find solutions for these data gaps, and to develop methods for linking AOC data with WTSC and WSDOT crash data.

Office of Financial Management population estimates

Washington's Office of Financial Management (OFM) has been providing annual population estimates for revenue allocation purposes since the 1940s. OFM provides population estimates, including breakouts by county, age, gender, and race/ethnicity, on their [population page](#).



Appendix E: Data Definitions

Target Zero draws its fatality data from the national Fatality Analysis Reporting System (FARS), housed at WTSC for Washington State’s data. Its serious injury data comes from the state-level Collision Location & Analysis System (CLAS), housed at WSDOT. This appendix describes the specific definitions and codes used to determine which crashes are included in emphasis area data, and which are not.

MEASURES	FATALITY DEFINITION From FARS database	SERIOUS INJURY DEFINITION From CLAS database
PRIORITY LEVEL ONE:	Fatality resulting from a crash that involved:	Serious injury resulting from a crash that involved:
Impairment Involved	Any driver or non-motorist with a Blood Alcohol Concentration (BAC) of 0.08 or higher or a positive drug result as confirmed by the state Toxicology Laboratory.	Any driver or non-motorist in which the investigating officer or drug recognition expert (DRE) indicated that the person was impaired by drugs or alcohol and reported in contributing circumstances as “Under the Influence of Alcohol,” “Under the Influence of Drugs,” or “Had Taken Medication” or sobriety reported as “HBD – Ability Impaired” or “HBD – Ability Impaired (tox test).”
Drug Impairment Involved	Any driver or non-motorist with a positive drug result as confirmed by the state Toxicology Laboratory.	NOT APPLICABLE. Due to no confirmation by toxicology, drug impairment involved serious injuries are not reported.
Alcohol Impairment Involved	Any driver or non-motorist with a BAC of 0.08 or higher as confirmed by the state Toxicology Laboratory.	Any driver or non-motorist in which the investigating officer or DRE indicated that the person was impaired by alcohol and reported in contributing circumstances.
Drinking Involved	Any driver or non-motorist with a BAC of any value except zero, as confirmed by the state Toxicology Laboratory (also includes alcohol impaired persons).	Any driver or non-motorist for whom the investigating officer or DRE reported sobriety as “Had Been Drinking” or contributing circumstance of “Under the Influence of Alcohol.”

MEASURES	FATALITY DEFINITION From FARS database	SERIOUS INJURY DEFINITION From CLAS database
PRIORITY LEVEL ONE:	Fatality resulting from a crash that involved:	Serious injury resulting from a crash that involved:
Lane Departure	Derived from CLAS and flagged in FARS. WSDOT provides reports to WTSC for flagging run-off-the-road and head-on crashes. If either the run-off-the-road or head-on condition is true, then that case is counted for lane departure. Uses the same criteria described in the "Serious Injury" column.	A run-off-the-road event defined as the primary crash type is reported as "one parked-one moving," "struck fixed object," "struck other object," or "vehicle overturned" AND object struck is NOT "Animal-Drawn Vehicle," "Closed Toll Gate," "Domestic Animal (ridden)," "Drawbridge Crossing Gate Arm," "Fallen rock hit by vehicle (on the road)," "Fallen Rock or Tree Hit by Vehicle," "Fallen tree hit by vehicle (on the road)," "Falling rock on vehicle (on the road)," "Falling Rock or Tree Fell on Vehicle," "Falling tree on vehicle (on the road)," "Manhole Cover," "Miscellaneous Object or Debris on Road," "Mud or Landslide," "Not Stated," "Railway Crossing Gate," "Reversible Lane Control Gate," "Snowslide," "Toll Booth," "Toll Booth Island," "Underside of Bridge," or miscellaneous object or debris on road AND junction relationship is "At Driveway but Not Related," "At Intersection and Not Related," "At Roundabout but not Related," "Not at Intersection and Not Related" AND the first impact location code is not "A1," "A2," "A3," "A4," "A5," "A6," "AA," "AB," "AC," "C1," "D1," "D2," "D3," "D4," "D5," "D6," "DA," "DB," "DC," "H1," "H2," "H3," "H4," "H5," "H6," "L1," "L2," "L3," "L4," "L5," "L6," "M1," "M2," "M3," "M4," "M5," "M6," "N1," "N2," "N3," "N4," "N5," "N6," "P1," "P2," "P3," "P4," "P5," "P6," "Q1," "Q2," "Q3," "Q4," "Q5," "Q6," "R1," "R2," "R3," "R4," "R5," "R6," "S1," "S2," "S3," "S4," "S5," "S6," "V1," "V2," "V3," "V4," "V5," "V6," "X1," "X2," "X3," "X4," "X5," "X6." Exclude cases if the vehicle action is "Going Wrong Way on Divided Highway," "Going Wrong Way on Ramp," "Going Wrong Way on One-Way Street or Road" and cases with corresponding junction relationships described in the intersection definition. Lane Departure also includes crashes resulting from opposite direction travel (head-on) defined as the primary crash type reported as "From opposite direction – both moving – head-on," "From opposite direction – one stopped – head-on," "From opposite direction – both going straight – sideswipe," "From opposite direction – both going straight – one stopped – sideswipe," "From opposite direction – all others" OR junction relationship is "At Driveway but Not Related," "At Intersection and Not Related," "At Roundabout but not Related," "Not at Intersection and Not Related" AND the first recorded vehicle action is "Going wrong way on divided highway," "Going wrong way on ramp," or "Going wrong way on one-way street or road."

MEASURES	FATALITY DEFINITION From FARS database	SERIOUS INJURY DEFINITION From CLAS database
PRIORITY LEVEL ONE:	Fatality resulting from a crash that involved:	Serious injury resulting from a crash that involved:
Speeding	Any driver exceeding the posted speed limit or driving too fast for conditions at the time of the crash as indicated by the investigating officer.	Any driver exceeding the posted speed limit or driving too fast for conditions at the time of the crash as reported by the investigating officer in contributing circumstances.
Young Driver Age 16-25 Involved	Any driver between the ages of 16 and 25 years.	Any driver between the ages of 16 and 25 years.
Intersection Related	Derived from CLAS and flagged in FARS. Uses the same criteria described in the “Serious Injury” column.	A junction relationship reported as at intersection and related; intersection related but not at intersection; at driveway within major intersection; entering roundabout; circulating roundabout; exiting roundabout; roundabout related but not at roundabout; or traffic calming circle.

MEASURES	FATALITY DEFINITION From FARS database	SERIOUS INJURY DEFINITION From CLAS database
PRIORITY LEVEL TWO:	Fatality resulting from a crash that involved:	Serious injury resulting from a crash that involved:
Distracted Driver Involved	Any driver with the following attributes as indicated by the investigating officer: (2009 and earlier) emotional; inattentive/careless; cellular telephone; fax machine; cellular telephone in use in vehicle; computer; computer fax machines/printers; on-board navigation system; two-way radio; or head-up display: (2010 and later) looked but did not see; by other occupants; by moving object in vehicle; while talking or listening to cellular phone; while dialing cellular phone; adjusting audio or climate controls; while using other device integral to vehicle; while using or reaching for device brought into vehicle; distracted by outside person, object, or event; eating or drinking; smoking related; other cellular phone related; distraction/inattention details unknown; inattentive or lost in thought; or other distraction.	Any driver with the following attributes reported in contributing circumstances: inattention; driver operating handheld telecommunications device; driver operating hands-free wireless telecommunications device; driver operating other electronic device; driver adjusting audio or entertainment system; driver smoking; driver eating or drinking; driver reading or writing; driver grooming; driver interacting with passengers, animals, or objects inside vehicle; other driver distractions inside vehicle; other driver distractions outside vehicle; or unknown driver distraction.
Unlicensed Driver Involved	Any driver with a license status of not licensed; suspended; revoked; expired; or canceled or denied as verified by Department of Licensing records.	NOT APPLICABLE. Reliable driver license status at the time of the crash is not available in serious injury data.
Motorcyclists	A vehicle body type coded as motorcycle; three-wheel motorcycle/moped – not all terrain vehicle; or off-road motorcycle 2-wheel (excludes mopeds, mini-bikes, motor scooters, and unknown motored cycle type).	A vehicle type reported as motorcycle (excludes scooter bikes and mopeds).
Pedestrians	A fatal person type coded as pedestrian or person on personal conveyances.	A seriously injured person coded as pedestrian (includes person on foot, roller skater/skateboarder, wheelchair, flagger, roadway worker, and EMS personnel).
Older Driver Involved (age 70+)	Any driver age 70 years or older.	Any driver age 70 years or older.

MEASURES	FATALITY DEFINITION From FARS database	SERIOUS INJURY DEFINITION From CLAS database
PRIORITY LEVEL THREE:	Fatality resulting from a crash that involved:	Serious injury resulting from a crash that involved:
Heavy Truck Involved	Any vehicle coded as “step van >10,000lbs,” “single-unit straight/cab chassis, GVWR >10,000lbs or unknown,” “Truck-tractor,” “Medium/Heavy P/U >10,000lbs,” “Unk unit or combination >10,000lbs,” “Unk medium/heavy truck type,” OR “Unk truck (light, medium, heavy) with one or more trailers.”	Any vehicle that also has a vehicle classification of “trailer with GVWR of 10,001 lbs. or more, if GVWR of combined vehicle(s) is 26,001 lbs or more – CDL required,” “single vehicle with GVWR of 26,001 lbs. or more; or any school bus regardless of size – CDL required,” “single vehicle of 26,000 lbs. or less, designed to carry 16 passengers or more; or any vehicle regardless of size which requires HAZ MAT Placard -CDL required” or a commercial vehicle supplement to the collision report; OR a vehicle type reported as “truck (flatbed, van, etc.),” “truck and trailer,” “truck tractor,” “truck tractor and semi-trailer,” or “truck-double trailer combinations”; OR a vehicle usage classification reported as concrete mixer, dump truck, logging truck, refuse/recycle truck, vanette over 10,001 lbs., tanker truck, tow truck, or auto carrier.
Drowsy Driver Involved	Any driver with a driver related factor coded as “drowsy, sleepy, asleep, fatigued” (2009 and prior) or a driver condition coded as asleep or fatigued (2010 and later).	any driver apparently asleep or apparently fatigued as reported by the investigating officer in the contributing circumstances.
Bicyclists	A fatal person type coded as bicyclist or other cyclist.	A seriously injured person coded as pedcyc driver or pedcyc passenger (includes bicycles and tricycles).

MEASURES	FATALITY DEFINITION From FARS database	SERIOUS INJURY DEFINITION From CLAS database
OTHER MONITORED AREAS:	Fatality resulting from a crash that involved:	Serious injury resulting from a crash that involved:
Work Zone Involved	A work zone status coded as construction; maintenance; utility; or work zone, type unknown.	A work zone status reported as within work zone or in external traffic backup caused from work zone.
Wildlife Involved	Sequence of events coded as animal.	A crash type reported as non-domestic animal (2008 and prior) or a crash type reported as vehicle strikes deer; vehicle strikes elk; or vehicle strikes all other non-domestic animal (2009 and later).
School Bus Involved	A vehicle coded as school bus.	A vehicle type reported as school bus.
Vehicle Train	Sequence of events coded as railway train.	A crash type reported as train struck moving vehicle; train struck stopped or stalled vehicle; vehicle struck moving train; or vehicle struck stopped train.

MEASURES	FATALITY DEFINITION From FARS database	SERIOUS INJURY DEFINITION From CLAS database
OTHER MEASURES:	Fatality resulting from a crash that involved:	Serious injury resulting from a crash that involved:
Rural Roads	A federal functional roadway classification of rural principal arterial-interstate; rural principal arterial-other; rural minor arterial; rural major collector; rural minor collector; rural local road or street; or rural unknown.	NOT APPLICABLE. Federal functional class missing for crashes occurring within city limits.
Urban Roads	A federal functional roadway classification of urban principal arterial-interstate; urban principal arterial-other freeways or expressways; urban other principal arterial; urban minor arterial; urban collector; urban local road or street; or urban unknown.	NOT APPLICABLE. Federal functional class missing for crashes occurring within city limits.
State Routes/Jurisdiction	Derived from CLAS and flagged in FARS. Uses the same criteria described in the Serious Injury column.	A report classification of state route.
City Routes/Jurisdiction	Derived from CLAS and flagged in FARS. Uses the same criteria described in the Serious Injury column.	A report classification of city street, or a crash classified as state route with access control of limited access occurring within the city limits of a city having a population over 25,000.
County Roads/Jurisdiction	Derived from CLAS and flagged in FARS. Uses the same criteria described in the Serious Injury column.	A report classification of county road.
Miscellaneous Trafficways	Derived from CLAS and flagged in FARS. Uses the same criteria described in the Serious Injury column.	A report classification of miscellaneous trafficway.

Appendix F: Strategy Definitions and Criteria

Each emphasis area of Target Zero contains a list of strategies that practitioners can use to reduce traffic fatalities. This appendix describes how Target Zero analysts evaluate these strategies for inclusion in the plan.

Strategies listed in Target Zero are given a designation of proven, recommended, or unknown as described in the table below. For this review process, Target Zero evaluators chose three main resources to serve as the foundation for the designations:

- Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices (8th Edition 2016), which focuses on behavior.
- The National Cooperative Highway Research Program Report 500 Series, which focuses on both engineering and behavior.
- Crash Modification Factors Clearinghouse, which focuses on engineering.

Disagreement among these sources is rare, but when it happens, evaluators defer to the source that is most aligned with the type of strategy. Therefore, in general, Countermeasures That Work usually takes precedence for behavior/program strategies, Crash Modification Factors takes precedence for engineering strategies, and the NCHRP report prevails when a strategy is not present in either of the first two sources.

Strategy Effectiveness in Target Zero	Target Zero Definition	Countermeasures That Work	NCHRP 500 Report	Crash Modification Factors (CMF) Clearinghouse
Proven	Demonstrated to be effective by several evaluations with consistent results.	★★★★★ Demonstrated to be effective by several high-quality evaluations with consistent results.	Proven (P). Those strategies that have been used in one or more locations and for which properly designed evaluations have been conducted which show them to be effective.	★★★★★ = 14 quality points
Recommended	Generally accepted to be effective based on evaluations or other sources.	★★★★ Demonstrated to be effective in certain situations, or ★★★ Likely to be effective based on balance of evidence from high-quality evaluations or other sources	Tried (T). Those strategies that have been implemented in a number of locations, and may even be accepted as standards or standard approaches, but for which there have not been found valid evaluations.	★★★ = 7–10 quality points
Unknown	Limited evaluation evidence, or experimental.	★★ Effectiveness still undetermined; different methods of implementing this countermeasure produce different results. ★ Limited or no high-quality evaluation evidence.	Experimental (E). Those strategies representing ideas that have been suggested, with at least one agency considering them sufficiently promising to try them as an experiment in at least one location.	★★ = 3–6 quality points

Evaluators reviewed each of these publications for the Target Zero plan. They looked for the strategies that Target Zero’s statewide partners identified to reduce fatalities and serious injuries, and compared them with the designations adopted according to the table. In some instances, partners slightly modified strategies to be more specific to Washington State, but their strategies were still aligned with the strategies in these publications, and therefore designated the same.

If evaluators could not find a strategy in the three resources described in the table, then they conducted further review, in the following order:

- Was the strategy supported with published, favorable outcomes in the form of a meta study (a review of several related studies for methodological strength and consistent outcomes)? If yes, these strategies were designated proven with META as the source.
- Was the strategy supported by extensive literature but lacks a metastudy? If yes, these strategies were designated proven or recommended with LIT as the source, dependent on evaluation of the quality and outcomes of the available literature.
- Was the strategy a recommendation supported by a state or federal agency, backed by cited evaluation/data? If yes, these strategies were designated recommended with the supporting agency as the source.

- If a strategy did not meet the proven or recommended criteria, or did not meet one of the criteria listed above, then the strategy was designated unknown. The unknown designation was assigned to strategies when:
 - The strategy was listed in one of the three main resources with lower quality ratings.
 - The literature was insufficient to designate it as recommended.
 - There was sufficient literature, but outcomes were inconsistent and inconclusive between studies.

While the proven, recommended, and unknown designations provide some indication of relative effectiveness, any system for weighting traffic safety strategies is imperfect. The particular context in which a strategy is employed is immensely important and difficult to capture in prioritization systems. Nevertheless, as a general rule, organizations should give priority to strategies listed as proven, followed by those designated as recommended. Strategies listed as unknown should only be utilized when proven and recommended strategies are not viable. In cases where an unknown strategy is selected for implementation, organizations should develop a straightforward plan for evaluation to add to the body of knowledge and enhance future decision-making.

Appendix G:

Federal Requirements and Target Zero

This appendix explains the federal requirements regarding establishing and updating the Strategic Highway Safety Plan (SHSP) for all 50 states. Target Zero is Washington's SHSP.

Two major federal laws influence the content and implementation of Target Zero: Moving Ahead for Progress in the 21st Century (MAP-21) Act and the Fixing America's Surface Transportation (FAST) Act. Under these laws, the Federal Highway Administration (FHWA) sets policy that guides the implementation and evaluation of the SHSP.

FHWA published their Highway Safety Improvement Program (HSIP) Final Rules with an effective date of April 14, 2016. These Final Rules implement the HSIP requirements established in MAP-21 and the FAST Act, and establish clear requirements for updating the state's SHSP.

The HSIP is a core federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. The HSIP regulation under 23 CFR 924 establishes the FHWA's HSIP policy, as well as program structure, planning, implementation, evaluation, and reporting requirements which state must follow to successfully administer the HSIP. The HSIP Final Rule updates HSIP requirements under 23 CFR 924 to be consistent with MAP-21 and the FAST Act, and clarifies program requirements. In addition to clarifying other programs, the HSIP Final Rule contains performance management requirements for SHSP updates.

FHWA has been working in partnership with key stakeholders for many years to prepare for these new rules. They will reinforce a data-driven approach to making safety decisions, improve collaboration across a wide range of safety partners, and provide transparency for the American public as states set goals, report on safety targets and, most importantly, save lives.

Meeting Federal Requirements for Target Zero

23 USC 148 requires all states to have an updated, approved SHSP which is consistent with specific requirements under section 148. The updated SHSP must be submitted to the FHWA Division Administrator, who will ensure that the state has followed a process that meets these requirements.

The FHWA provides an SHSP Process Approval Checklist, which is a tool to help Division Offices assess the process and completeness of the SHSP update. The requirements outlined in the Process Approval Checklist include detailed specific Indicators and Considerations which must be met by the state. Washington's plan has met all requirements in the past, and believes that it has met them with the 2016 update as well.



SHSP Approval Checklist

- Consultation with appropriate stakeholders and traffic safety partners during the update process.
- Comprehensive use of data to develop plan emphasis areas and safety improvement strategies, including safety data from non-state-owned public roads and Tribal land.
- Performance management and adoption of performance-based goals which are consistent with established safety performance measures.
- Employing a multi-disciplinary approach which addresses engineering, management, operations, education, enforcement, and emergency services elements of highway safety as key features when determining SHSP strategies.
- Coordination with other state, regional, local, and Tribal transportation and highway safety planning processes; a demonstration of consultation among partners in the development of transportation safety plans; and an SHSP which provides strategic direction for other transportation plans.
- An implementation focus which describes process, actions, and potential resources for implementing the strategies in the emphasis areas.
- Requirements to evaluate the SHSP as part of the HSIP update process, including confirming the validity of the emphasis areas and strategies based on analysis of safety data, and identifying issues related to the SHSP's process, implementation, and progress.
- Special rules which require including the state's definition of High Risk Rural Road and strategies to address the increases in older driver and pedestrian traffic fatalities and serious injuries, if applicable.
- A detailed description of the SHSP update process, included as a section, chapter, or appendix in the SHSP.
- A requirement to complete the SHSP update no later than five years from the date of the previous approved version.
- A requirement that the SHSP be approved and signed by the Governor of the state or a state official that is delegated by the Governor.
- Approval by the FHWA Division Administrator.

Appendix H: Target Zero Plan Development

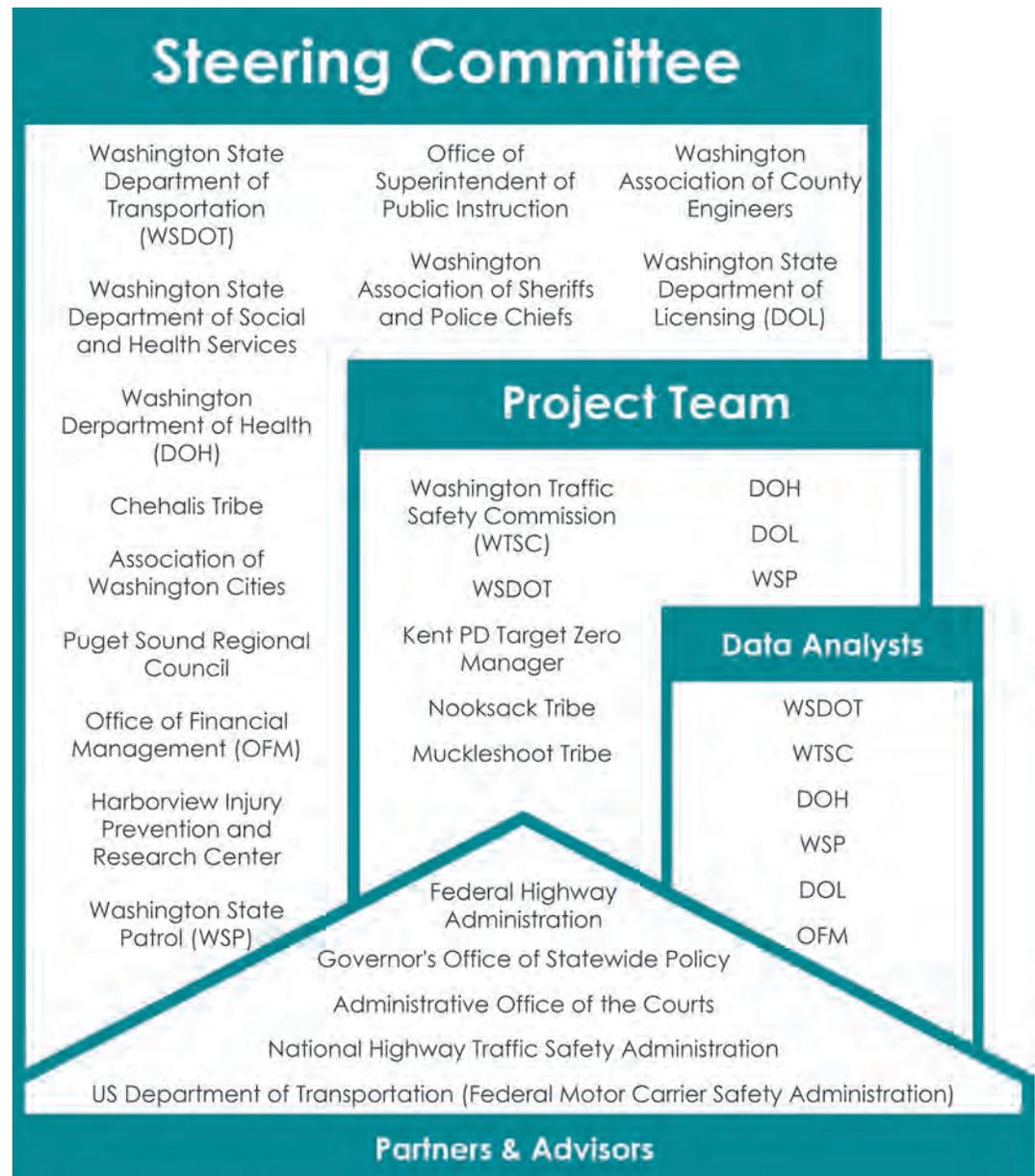
Developing and writing Target Zero is a multi-year process, and a collaboration across many groups. This appendix describes the process of developing the plan.

In 2015, the Washington Traffic Safety Commission (WTSC) and the Washington Department of Transportation (WSDOT) partnered together to develop the 2016 version of Washington State's Target Zero Strategic Highway Safety Plan (SHSP). Over 60 organizations directly contributed to the development of this new SHSP, and dozens of others advised the project along the way. These traffic safety partners intend for the plan to coordinate traffic safety programs across the state, align priorities and strategies among the various partners, and provide a common language and approach for traffic safety efforts.

The Target Zero plan has been revised and updated several times since the first edition in 2000. In the 2016 plan, we took a new look at the data, priorities, strategies, and format. We believe this has resulted in a plan that will be useful for a wide range of Washington's citizens, policy makers, and traffic safety professionals.

We began the project by establishing the Data Analyst Group, a partnership of data experts from the state agencies that manage Washington's critical traffic safety data systems. The Data Analyst Group coordinated the update of the fatality and serious injury data, made data-based recommendations on which factors were the biggest contributors to deaths and serious injuries on our roadways, and developed the new Priority Table (on page page 11).

Along with the Data Analyst Group, a number of key partners came together in a formal, multi-disciplinary



project structure to create the Target Zero Project Team and the Steering Committee. The Project Team consisted of manager-level representatives who developed the project plan and timeline, coordinated a vast amount of work, made decisions regarding plan structure and content, wrote the plan sections and chapters, and evaluated strategies for inclusion in the plan. The Steering Committee consisted of senior-level management representatives who provided the project with strategic direction and executive guidance, and helped ensure the project had appropriate resources for success.

In addition, the Target Zero Project Team received advice from leaders at the state and federal levels, including representatives from the Governor's Office, WSDOT, the Administrative Office of the Courts, the US Department of Transportation, the Federal Highway Administration (FHWA), and the National Highway Traffic Safety Administration (NHTSA).

To round out the project and gather input from a broader stakeholder group, the Project Team held a Target Zero Partners Meeting in December 2015. More than 170 additional people involved in traffic safety from across the state attended. Together they reviewed the preliminary data and new priorities, provided feedback and input on strategies for addressing some of the plan's priority areas, and gave insight into what specific traffic safety messages will best impact our target audiences.

In May 2016, the Project Team and Steering Committee sent out a draft of the new Target Zero plan for external review by Tribes, partners, and many other stakeholders. The input they received helped finalize the 2016 plan and established a baseline for future revisions.

At the concluding stages of the Target Zero plan development, the Project Team provided final recommendations to the Steering Committee, who then sent the newly-revised Plan to the WTSC Commissioners and FHWA for their approval. In July 2016, the Commissioners delivered the final Strategic Highway Safety Plan to Governor Jay Inslee for his approval and signature.

Appendix I: Additional Resources

Impairment Involved

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 8th Edition, DOT HS 812 202, November 2015, “Chapter 1, Alcohol- and Drug-Impaired Driving”, (National Highway Traffic Safety Administration, NHTSA, Washington, DC), <http://www.ghsa.org/html/publications/countermeasures.html>

Drug-Impaired Driving: A Guide for What States Can Do, September, 2015, (Governor’s Highway Safety Association), <http://www.ghsa.org/html/publications/2015drugged.html>

NCHRP Report 500, “Volume 16: A Guide for Reducing Alcohol-Related Collisions”, (National Cooperative Highway Research Program, Transportation Research Board), http://www.trb.org/Publications/Public/Blurbs/A_Guide_for_Reducing_AlcoholRelated_Collisions_156343.aspx

NHTSA Traffic Safety Facts: Research Note, DOT HS 811 687, November 2012, “Washington’s Target Zero Teams Project: Reduction in Fatalities During Year One”, (National Highway Traffic Safety Administration, NHTSA, Washington, DC), www.nhtsa.gov/staticfiles/nti/pdf/811687.pdf

“The Guiding Principles of DWI Courts”, (National Center for DWI Courts), <http://www.dwicourts.org/learn/about-dwi-court/-guiding-principles>

“Washington’s Impaired Driving Advisory Council (WIDAC) Strategic Plan”, (Washington Traffic Safety Commission), <http://wtsc.wa.gov/programs-priorities/impaired-driving/>

Speeding Involved

“Speeding and Aggressive Driving”, Accessed January 26, 2015, (Governor’s Highway Safety Association), <http://www.ghsa.org/html/issues/speeding.html>

Toward Zero Deaths (TZD) Steering Committee, “Towards Zero Deaths: Strategy”, Accessed January 26, 2015, (TZD, National Strategy on Highway Safety), <http://www.towardzerodeaths.org/strategy/>

D. C. Richards, Transport Research Laboratory, September 2010, *Road Safety Web Publication No. 16*: “Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants”, (Department for Transport, London), http://nacto.org/docs/usdg/relationship_between_speed_risk_fatal_injury_pedestrians_and_car_occupants_richards.pdf

Relationship of Traffic Fatality Rates to Maximum State Speed Limits, April 2016, Charles M. Farmer, Insurance Institute for Highway Safety

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- “Speed limit increases cause 33,000 deaths in 20 years”, Status Report, Vol. 51, No. 4, April 12, 2016, (Insurance Institute for Highway Safety, Highway Loss Data Institute), <http://www.iihs.org/iihs/news/desktopnews/speed-limit-increases-cause-33000-deaths-in-20-years>

Distraction Involved

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 8th Edition, DOT HS 812 202, November 2015, “Chapter 4, Distracted and Drowsy Driving”, (National Highway Traffic Safety Administration, NHTSA, Washington, DC), <http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

NCHRP Report 500, “Volume 14: A Guide for Reducing Crashes Involving Drowsy and Distracted Drivers”, (National Cooperative Highway Research Program, Transportation Research Board), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v14.pdf

Unrestrained Vehicle Occupants

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 8th Edition, DOT HS 812 202, November 2015, “Chapter 2, Seat Belts and Child Restraints”, (National Highway Traffic Safety Administration, NHTSA, Washington, DC), <http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

NCHRP Report 500, “Volume 11: A Guide for Increasing Seat Belt Use”, (National Cooperative Highway Research Program, Transportation Research Board), http://www.trb.org/Publications/Public/Blurbs/A_Guide_for_Increasing_Seatbelt_Use_154846.aspxhttp://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v14.pdf

National Child Passenger Safety Certification, <http://cert.safekids.org/>

Safe Kids Worldwide, <http://www.safekids.org/child-passenger-safety>

“2014 Statewide Estimates of Child Restraint Use Among Elementary Students”, (Washington Traffic Safety Commission), http://wtsc.wa.gov/wp-content/uploads/dlm_uploads/2014/12/Statewide-Estimates-of-Child-Restraint-Use-Among-Elementary-Students_FINAL.pdf

“Safe Kids Worldwide - Motor Vehicle Fact Sheet”, January 2015, (Safe Kids Worldwide), http://www.safekids.org/sites/default/files/documents/skw_motor_vehicle_fact_sheet_january_2015.pdf

Unlicensed Driver Involved

NHTSA Traffic Safety Facts: Research Note, DOT HS 811 392, November 2009, “Washington’s Target Zero Teams Project: Reduction in Fatalities During Year One”, (National Highway Traffic Safety Administration, NHTSA, Washington, DC), <http://www-nrd.nhtsa.dot.gov/Pubs/811392.pdf>

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AAA Foundation for Traffic Safety, November 2011, “Unlicensed to Kill”, <https://www.aaafoundation.org/sites/default/files/2011Unlicensed2Kill.pdf>

California DMV, 2012 RSS-12-238, Sukhvir Brar

- USDOT NHTSA, 2009 reported for 1998 through 2007:
 - number of drivers without valid license at time of fatal crash increased 17% nationally
 - percent of drivers without valid license at time of fatal crash increased 27% (from 11% in 1998 to 14% in 2007).
- Using 23 years of data (1987-2009), CA DMV found that unlicensed drivers were nearly three times more likely to cause a fatal crash than licensed drivers.
- AAA Foundation for Traffic Safety, 2011 “Unlicensed to Kill”
- AAA Foundation for Traffic Safety studies found approximately one in five fatal crashes involved an unlicensed or invalidly licensed driver (1993-97).
- Analysis of the trends over the past 20 years shows an

increasing proportion of fatal-crash involved drivers who were unlicensed.

- Using 2007-09 national FARS data, 18.2% of the fatal crashes involved a driver who was unlicensed or invalidly licensed, resulting in the deaths of 21, 049 people.

Drivers involved in fatal crashes who had no valid license at time of crash (nationally)

- 13.8% in 1993-1997 (AAA)
- 11% of in 1998 (USDOT)
- 14% in 2007 (USDOT)
- 14.2% in 2007-2009 (AAA)

Drowsy Driver Involved

AAA Foundation for Traffic Safety, “Drowsy Driving”, <https://www.aaafoundation.org/drowsy-driving>

NCHRP Report 500, “Volume 14: A Guide for Reducing Crashes Involving Drowsy and Distracted Drivers”, (National Cooperative Highway Research Program, Transportation Research Board), page III-1, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v14.pdf

Centers for Disease Control and Prevention, “Drowsy Driving: Asleep at the Wheel”, <http://www.cdc.gov/features/dsdrowsydriving/>

School Bus

School, Walk and Bike Route Guide, Feb. 2015, “School Walk and Bike Routes: A Guide for Planning and Improving Walk and Bike to School Options for Students”, (WA State Department of Transportation, WSDOT), <http://www.wsdot.wa.gov/LocalPrograms/SafeRoutes/GuideProject.htm>

Educational Service District 112, “Regional Student Transportation”, <http://web3.esd112.org/regionaltrans>

Washington Office of Superintendent of Public Instruction (OSPI), “Student Transportation”, <http://www.k12.wa.us/transportation/>

Vehicle-Train

Washington Utilities and Transportation Commission (UTC), “Rail Safety”, <http://www.utc.wa.gov/publicSafety/railSafety/Pages/default.aspx>

Operation Lifesaver, Inc., “Rail Safety Education”, <http://oli.org/>

“WSDOT State Rail Plan”, (Washington State Department of Transportation), <http://www.wsdot.wa.gov/Rail/staterailplan.htm>

Young Drivers 16–25 Involved

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 7th Edition, DOT HS 811 727, April 2013, “Chapter 6, Young Drivers”, (National Highway Traffic Safety Administration, NHTSA, Washington, DC), <http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

OECD Transport Research Centre, 2006, “Young Drivers: The Road to Safety”, (Organization for Economic Cooperation and Development, OECD, European Conference of Ministers of Transport), <http://www.itf-oecd.org/sites/default/files/docs/06youngdrivers.pdf>

“Promoting Parent Involvement in Teen Driving: An In-Depth Look at the Importance and the Initiatives”, 2013, (Governor’s Highway Safety Association), <http://www.ghsa.org/html/files/pubs/sfteens13.pdf>

“RUaD Coalition Strategic Plan 2011-2013”, (Washington State Coalition to Reduce Underage Drinking), http://docs.theathenaforum.org/sites/default/files/2011%20RUaD%20Annual%20Report%20_0.pdf

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Emergency Department”, <http://pubs.niaaa.nih.gov/publications/arh28-2/63-72.pdf>

AAA Foundation for Traffic Safety, “Teen Driver Safety”, <https://www.aaafoundation.org/teen-drivers>

Washington State Department of Licensing, <http://www.dol.wa.gov/>

AAA Foundation for Traffic Safety, May 2012, “Teen Driver Risk in Relation to Age and Number of Passengers”, https://www.aaafoundation.org/sites/default/files/research_reports/2012TeenDriverRiskAgePassengers.pdf.

Motorcyclists

National Highway Traffic Safety Administration, DOT HS-812-148, 2015, “Traffic Safety Facts, 2013: Motorcycles”, (National Highway Traffic Safety Administration, NHTSA, US Department of Transportation, Washington, DC), <http://www-nrd.nhtsa.dot.gov/Pubs/812148.pdf>

National Motorcycle Institute, “Washington State Total Motorcycle Driver Fatalities: 1991-2014”, <http://www.motorcycleinstitute.org/docs/data/tdf/wa-total-driver-fatalities.pdf>

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Pedestrians

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 7th Edition, DOT HS 811 727, April 2013, “Chapter 8, Pedestrians”, (National Highway Traffic Safety Administration, NHTSA, Washington, DC), www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf

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(Washington State Department of Transportation and University of Washington), <http://www.wsdot.gov/research/reports/fullreports/733.1.pdf>

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Older Drivers 70+ Involved

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Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 7th Edition, DOT HS 811 727, April 2013, "Chapter 7, Older Drivers", (National Highway Traffic Safety Administration, NHTSA, Washington, DC), <http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

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Municipal Rules relating to bicyclists:

- Bicycle Helmets – Currently, there is no state law requiring helmet use. However, some cities and counties do require helmets. See bicycle helmet requirements in Washington by municipality (<http://www.wsdot.wa.gov/bike/helmets.htm>).
- Roads Closed to Bicycles – Some designated sections of the state’s limited access highway system may be closed to bicycles for safety reasons. See state highway sections closed to bicycles (<http://www.wsdot.wa.gov/bike/closed.htm>) for more information. In addition, local governments may adopt ordinances banning cycling on specific roads or on sidewalks within business districts.

Tribes and Target Zero

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Appendix J: Traffic Safety Partnership List

The following organizations were consulted in the development of Washington State's Target Zero Strategic Highway Safety Plan and are critical to achieving SHSP goals.

Washington State Government:

Governor Jay Inslee
Governor's Office
Administrative Office of the Courts
County Road Administration Board
Criminal Justice Training Commission
Department of Health
Department of Licensing
Department of Social and Health Services
Department of Transportation
Liquor Control Board
Office of Financial Management
Office of Indian Affairs
Office of Public Defense
Office of Superintendent of Public Instruction
Results Washington
State House of Representatives Members and Staff
Washington State Patrol
State Senate Members and Staff
Transportation Policy Office

Washington State University
Washington Traffic Safety Commission
Transportation Commission
Transportation Improvement Board
Utilities and Transportation Commission
UW Harborview Injury Prevention and Research Center

Federal Government:

National Highway Traffic Safety Administration, Region 10
Federal Highway Administration, Washington Division
Federal Highway Administration, Federal Lands
Federal Motor Carrier Safety Administration
Federal Railroad Administration, Region 8

Tribal Nations and Organizations:

Confederated Tribe of the Chehalis Reservation
Confederated Tribes of the Colville Reservation

Cowlitz Indian Tribe
Hoh Tribe
Jamestown S'Klallam Tribe
Kalispel Tribe
Lower Elwha Klallam Tribe
Lummi Nation
Makah Tribe
Muckleshoot Indian Tribe
Nisqually Tribe
Nooksack Tribe
Port Gamble S'Klallam Tribe
Puyallup Tribe
Quileute Nation
Quinault Nation
Samish Nation
Sauk-Suiattle Tribe
Shoalwater Bay Tribe
Skokomish Tribe
Snoqualmie Tribe
Spokane Tribe of Indians
Squaxin Island Tribe
Stillaguamish Tribe
Suquamish Tribe

Swinomish Indian Tribal Community
Tulalip Tribes
Upper Skagit Tribe
Yakama Nation
Bureau of Indian Affairs
Northwest Association of Tribal
Enforcement Officers
Tribal Transportation Planning Organization
Washington Indian Transportation Policy
Advisory Committee

Local Law Enforcement:

Bellingham Police Department
Bonney Lake Police Department
Centralia Police Department
Clark County Sheriff's Office
Cowlitz County Sheriff's Office
Federal Way Police Department
Ferndale Police Department
Fife Police Department
Grant County Sheriff's Office
Grays Harbor County Sheriff's Office
Island County Sheriff's Office
Kent Police Department
King County Sheriff's Office
Kirkland Police Department
Kitsap County Sheriff's Office
Lacey Police Department
Lewis County Sheriff's Office

Lynnwood Police Department
Mason County Sheriff's Office
Puyallup Police Department
Renton Police Department
Seattle Police Department
Shelton Police Department
Skagit County Sheriff's Office
Thurston County Sheriff's Office
Wenatchee Police Department
Yakima Police Department

Community, Local, and Regional Agencies and Organizations:

Target Zero Managers
Target Zero Community Traffic Safety Task
Forces
Association of Washington Cities
Bicycle Alliance of Washington
City of Bellevue
City of Everett
City of Gig Harbor
City of Kirkland
City of Mountlake Terrace
City of Pasco
City of Spokane
City of Tacoma
Cowlitz-Wahkiakum Council of
Governments

Cooper Jones Bicycle and Pedestrian
Committee
Educational Service District #113
Institute of Transportation Engineers -
Washington State Section
King County Metro Transit
King County Public Health
Kitsap County Public Works
League of American Bicyclists
Lewis County Public Works
Lewis County Public Health & Social
Services
Mossyrock School District
Operation Lifesavers
Pacific Northwest Transportation
Consortium
Puget Sound Regional Council
Safe Kids Worldwide
Safe Routes to Schools WA
Seattle Department of Transportation
Spokane City Council
Spokane County Prosecutor's Office
Thurston County Prosecuting Attorney's
Office
Thurston County Public Works
Thurston Regional Planning Council
Traffic Records Committee
University of Washington Transportation
Services
Washington Association of Counties

Washington Association of County Engineers

Washington Association of Prosecuting Attorneys

Washington Association of Sheriffs and Police Chiefs

Washington Impaired Driving Advisory Committee

Washington Traffic Incident Management Coalition

Washington Traffic Safety Education Association

Washington Trucking Association

Private and Non-Profit Organizations:

3M Corporation

AAA Washington

Altus Traffic Management

American Traffic Safety Services Association

Cascade Bicycle Club

Center for Defensive Driving

CSL Consulting

DKS Associates

DN Traffic Consultants

Driver Training Group

Driving 101

Eco Resource Management Systems

Evergreen Safety Council

Feet First

Freedom Driving School

Governor's Highway Safety Association

HDJ Design Group

IvS Analytics

Kittitas County Community Network

LifeSafer, Inc.

Mothers Against Drunk Driving

Municipal Research and Services Center

Project Imprint

Rolland Associates

Tacoma Pierce County Community Connections

Washington Road Riders Association

Washington Trucking Association

Appendix K: Special Thanks

Hundreds of traffic safety partners across the state were involved in creating the final Target Zero plan. Their participation included everything from providing suggestions and recommendations on strategies, to contributing data analysis and document reviews. Dozens of dedicated experts rolled up their sleeves and got to work to bring the SHSP update project in on time. For over a year, these folks gathered data, created charts and graphs, met to discuss findings, wrote and edited text, and collaborated with partners both inside and outside their organizations to complete the plan. Their commitment to creating a clear, data-driven, and inspiring document was fueled by their desire to realize the goal of zero traffic deaths and serious injuries by 2030.

We deeply thank them all for their extra efforts and hard work!

Sincerely,

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