

Appendices



Appendix A: Acronyms

501(c)(3)	US Internal Revenue Code for federal tax exemption of nonprofit organizations	HSP	Highway Safety Plan
AAA	American Automobile Association	HVE	High Visibility Enforcement
AADT	Average Annual Daily Traffic	IDL	Intermediate Drivers License
ABACCL	American Bar Association Center on Children and the Law	IIHS	Insurance Institute for Highway Safety
ALPR	Automated License Plate Readers	IIL	Ignition Interlock License
AOC	Washington Administrative Office of the Courts	ILT	Incident Location Tool
ARIDE	Advance Roadside Impaired Driving Enforcement	ITS	Intelligent Transportation Systems
ASE	Automated Speed Enforcement	LDTL	Let's Draw the Line Between Youth and Alcohol
ATNI	Affiliated Tribes of Northwest Indians	LIT	Literature Review
BAC	Blood Alcohol Concentration	MAP-21	Moving Ahead for Progress in the 21st Century
CDC	Centers for Disease Control	META	Meta Study
CEU	Continuing Education Unit	NACTO	National Association of City Transportation Officials
CHARS	Comprehensive Hospital Abstract Reporting System	NCSC	National Complete Streets Coalition
CIOT	Click It or Ticket	NCHRP	National Cooperative Highway Research Program
CLAS	Collision Location and Analysis System	NIH	National Institute of Health
CMF	Crash Modification Factor	NHTSA	National Highway Traffic Safety Administration
CMV	Commercial Motor Vehicles	NWTTAP	Northwest Tribal Technical Assistance Program
CODES	Crash Outcome Data Evaluation System	OFM	Office of Financial Management
CPST	Child Passenger Safety Technician	PIP	Party Intervention Patrol
CTW	Countermeasures That Work	POPS	Problem Oriented Public Safety
CVEB	Commercial Vehicle Enforcement Bureau	PTCR	Police Traffic Collision Report
CVSA	Commercial Vehicle Safety Alliance	RCW	Revised Code of Washington
CVSP	Commercial Vehicle Safety Plan	RTPO	Regional Transportation Planning Organization
DADSS	Driver Alcohol Detection System for Safety	RUaD	Reducing Underage Drinking
DBHR	Division of Behavioral Health and Recovery	SDOT	Seattle Department of Transportation
DDACTS	Data Driven Approaches to Crime and Traffic Safety	SECTOR	Statewide Electronic Collision and Ticket Online Records
DOH	Washington State Department of Health	SFST	Standard Field Sobriety Tests
DOL	Washington State Department of Licensing	SHSP	Strategic Highway Safety Plan
DRE	Drug Recognition Expert	SRTS	Safe Routes to School
DUI	Driving Under the Influence	TACT	Ticket Aggressive Cars and Trucks
DWI	Driving While Intoxicated (term used in some other states, but not in WA)	TDO	WSDOT Transportation Data Office
DWLS	Driving While License is Suspended or Revoked	THC	Tetrahydrocannabinol
DWLS 3	Driving While License is Suspended or Revoked Third Degree	TRC	Traffic Records Committee
EMS	Emergency Medical Services	TZM	Target Zero Manager
eTRIP GT	eTRIP Governance Team	TZT	Target Zero Team
FARS	Fatality Analysis Reporting System	UTC	Utilities and Transportation Commission
FHWA	Federal Highway Administration	USDOT	United States Department of Transportation
FMCSA	Federal Motor Carrier Safety Administration	V2I	Vehicle-to-Infrastructure
FRA	Federal Railroad Administration	V2V	Vehicle-to-Vehicle
FCAS	Frontal Crash Avoidance Systems	VMT	Vehicle Miles Traveled
FTA	Failure to Appear	WAC	Washington Administrative Code
GHSA	Governor's Highway Safety Association	WEMIS	Washington EMS Information System
HIE	Health Information Exchange	WIDAC	Washington Impaired Driving Advisory Council
HPMS	Federal Highway Performance Monitoring System	WITPAC	Washington Indian Transportation Policy Advisory Committee
HRRR	High Risk Rural Roads	WSDOT	Washington State Department of Transportation
HSIP	Highway Safety Improvement Program	WSP	Washington State Patrol
		WTR	Washington Trauma Registry
		WTSC	Washington Traffic Safety Commission
		WZSTF	Work Zone Safety Task Force

Appendix B: Glossary

Alcohol-impaired Driver

Any driver with a BAC of .08 or higher.

Bicycle Boulevard

Low-volume streets that have been optimized for bicycle travel through traffic calming and diversion, signage and pavement markings, and intersection crossing treatments. Bicycle boulevards are shared roadway facilities that, when correctly implemented, are comfortable and attractive to cyclists with a wide range of abilities and ages but are inconvenient as through routes for automobiles.

Bike Box

An intersection safety design to prevent bicycle/car collisions. It is a painted green space on the road with a white bicycle symbol inside. In some locations it includes a green bicycle lane approaching the box. The box creates space between motor vehicles and the crosswalk allowing bicyclists to position themselves ahead of motor vehicle traffic at an intersection.

Blood Alcohol Concentration

The 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.

Collision

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

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, pedalcyclist and pedestrian involved in the collision.

Corridor Safety Model

The Corridor Safety Program engages communities in custom-designing their own action plan to reduce the number and severity of crashes. It focuses on stretches of highway that have been identified as having the highest crash and fatality rates. The program uses low-cost engineering fixes and strong local partnerships to develop plans that include elements of education, enforcement, emergency services and engineering. Interested citizens along with businesses and agencies that have a vested interest in the safety of their roadways locally coordinate the program in each community.

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 (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.

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 heart 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 collision reports in the field and transmit this data to state repositories and authorized users.

Fatality

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

Fatality Analysis Reporting System (FARS)

Contains 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. More information is available on page 162.

Fatality Rate

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

Heavy Truck

- Any vehicle that also has a vehicle classification of trailer with GVWR of 10,001 lbs or more, single vehicle with GVWR of 26,001 lbs or more, or single vehicle of 26,000 lbs or less-CDL required or a commercial vehicle supplement to the collision report.
- A vehicle type of Truck and Trailer, Truck Tractor, Truck Tractor and Semi-Trailer, or Truck-Double Trailer Combinations.
- 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 an investigating officer or DRE assessment of impairment.

Impairment Related Collision

Any driver, pedestrian, cyclist, etc., with a BAC of 0.08 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 wheel-chairs), including that obtained from overhead trolley wires but not operated on rails.

Nonmotorist

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

1. Pedestrians
2. Bicyclists, tricyclists, and unicyclists
3. Occupants of parked motor vehicles
4. Others such as joggers, skateboard riders, 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.

Pedestrian Safety Zones

Pedestrian safety zone programs include education, enforcement, and engineering measures. The initiative can target at a full range of pedestrian crash problems within a limited geographic area or focused on particular types of problems that make up a large portion of the problem within a limited area.

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 as shown by an analysis of the person’s breath or blood, that person is guilty “per se” of driving under the influence.

Restraint

A device such as a seat belt, 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.

Road Diet

Roadway reconfiguration reducing the number of motor vehicle lanes to improve roadway safety. A typical reconfiguration is converting an undivided four lane roadway into three lanes made up of two through lanes and a center two-way left turn lane. The reduction of lanes allows the roadway to be reallocated for other uses such as bike lanes and/or pedestrian crossing islands.

Rural

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

Safety Edge

A beveled application of asphalt at the edge of pavement to prevent drop-offs between the pavement edge and gravel/earth shoulder.

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 collision data only. This is not the legal definition or medical definition of serious injury.

Speeding

Speeding occurs when drivers travel above the posted speed or too fast for conditions. Drivers may be traveling well under the posted speed, but weather conditions (such as icy roads) or poor visibility (such as a foggy night) could still cause drivers to lose control of their vehicles if they don’t have enough stopping time.

Trauma

A major or single or 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 in the state of Washington (this figure is formulated by the Transportation and Collision Data Office of WSDOT). More information on page 163.

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 to 25 involved in a fatal or serious injury collision (involvement does not indicate fault).



Appendix C: Methodologies

Fatality and Serious Injury Five- and Ten-Year Trend Line

This edition of Target Zero provides the most recent 10 years of traffic fatality and serious injury data available. The vision of Washington’s Target Zero – zero deaths and serious injuries by 2030 – was formed in 2000. The data needed to quantify and monitor this goal was improved in 2002.

In recent years the number of traffic safety partners adopting this vision and implementing Target Zero strategies has grown rapidly. Consequently, traffic fatalities and serious injuries are decreasing at unprecedented rates. To best display the positive impact of this rapid growth in cooperation and collaboration, the trend charts in this edition of Target Zero display both 10-year and five-year linear trend lines.

The vision of zero by 2030 itself is a linear concept. Therefore, using a linear measure of progress to compare to a linear goal makes the most sense. A linear trend is a straight line that follows a series of numbers. A trend line may indicate a declining, flat or increasing trend, depending on the average change among the series of numbers. Each year contributes equally to the average change.

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 most recent five years represent the continuous innovation that drove down the overall 10-year trend. By comparing the five-year trend to the 10-year trend, we can gauge whether we are progressing, just maintaining progress or even losing momentum.

Simply put, if the five-year trend line is below the 10-year trend line, we are progressing. If it is above the 10-year trend line, we are losing momentum and more must be done to change direction.

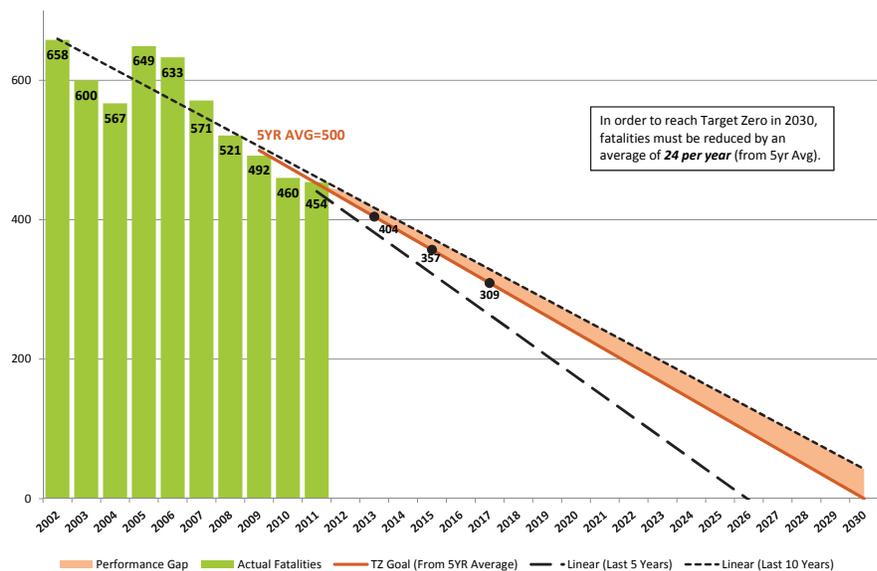
The Target Zero Goal Line

For this edition of Target Zero, fatality and serious injury trend charts are projected 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 middle of the current five-year average (2007-2011). Using the five-year average helps mitigate the skewing effect any single year might have on our progress toward zero.

The Target Zero goal line plots the average annual decrease required to reach zero fatalities and serious injuries by 2030. Determining the necessary average annual decline enables us to monitor our progress over several years.

For example, the current 2007-2011 average traffic fatality count is 500 (see chart below). In order to reach zero by 2030 from the middle of that average (2009), it will require an average decline of 24 fatalities per year. Each trend chart also shows the Target Zero goals for 2013 (404), 2015 (357) and 2017 (309).

Washington Fatalities from Traffic Crashes 2002-2011



In order to reach Target Zero in 2030, fatalities must be reduced by an average of 24 per year (from 5yr Avg).

While the exact values of the Target Zero goal line may serve as annual targets for reaching zero, more accurate assessments of progress occur when several years of data are grouped and compared.

The Performance Gap

The solid dark orange line on trend charts 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 10-year trend line. The trend charts show this “performance gap” in a lighter orange color. The 10-year trend line was chosen as the reference line for the performance gap for several reasons:

- More years of data result in more stable estimates
- Fluctuations in the historic counts are likely to continue into the future
- The 10-year trend represents a more conservative and accurate trend than the five-year trend

Some charts do not show a gap because the 10-year 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 2012 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 2012 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

Rates are referenced in some chapters of this Target Zero edition. There are three types of rates referenced:

1. Rates based on vehicle miles traveled
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 vehicle miles traveled (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 and rural and urban classifications (page 23).

Rates of fatalities and serious injuries specific to population subgroups, such as racial/ethnic and age-specific groups, are calculated per 100,000 population. 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, children and the Native American population (see pages 21, 25, 26).

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 (page 115).

Looking to the Future

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.

This is particularly true related to impacting more isolated, high risk or less receptive members of the population. As linear trends flatten and we get closer to 2030, more sophisticated statistical methods will need to be explored to monitor and predict outcomes. Our challenge is to continue to accurately monitor 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 and behavioral 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 and Emergency Medical Services, we will continue to prevent these collisions from happening in the first place and mitigate the harm incurred when they do happen.

While we may not be able to prevent every collision, we can eliminate deaths and serious injuries, which is our vision for Washington State.

Appendix D: Data Sources for Target Zero

The Fatality Analysis Reporting System

The Fatality Analysis Reporting System (FARS) is a nationwide census of traffic fatalities that characterizes the crash, the vehicles and the people involved in each fatal crash reported. 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 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 exclusionary parameters in FARS traffic fatality counts, visit <http://www.wtsc.wa.gov/statistics-reports/about-our-data/>. The Washington Traffic Safety Commission (WTSC) contracts with the National Highway Traffic Safety Administration (NHTSA) to provide FARS data for Washington State.

The Collision Locator Analysis System

The collision data repository, otherwise known as the Collision Location & Analysis System (CLAS), is housed at the Washington State Department of Transportation (WSDOT). The source for CLAS collision data is either law enforcement officers via the PTCR (90%) or citizens via the Vehicle Collision Report (10%).



CLAS stores all reportable traffic collision data for Washington State public roadways. A collision needs to meet at least one of the two following criteria to be considered as a “reportable” collision thereby making the collision record available to customers: 1) a minimum property damage threshold of \$700 and/or 2) bodily injury occurred as a result of the collision.

Within Target Zero, CLAS collision data was used for counts of seriously injured people. However, there are sections within Target Zero that also used CLAS collision information for deriving counts of fatally injured people through record merging with FARS. Those sections are as follows: 1) Run-off-the-Road, 2) Opposite Direction, 3) Intersection,

and 4) Heavy Truck Involved. CLAS collision 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 clinical records. The serious injury data presented in this edition of Target Zero is classified by the investigating officer at the scene. However, the multiagency collaborative efforts to derive a more accurate injury severity assessment related to traffic collisions, and particularly serious injury collisions, continues and progress is being made. For more information about the efforts of the Traffic Records Committee (TRC), see the Traffic Data Systems chapter (page 85).



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 or a network of roads with known length over a specific period of time, either a day or a year. The WSDOT Transportation Data Office (TDO) collects and reports several different types of road and street data to the Federal Highway Performance Monitoring System (HPMS) each year. The TDO collects traffic data for state highways and relies on local jurisdictions to provide traffic data for their roads and streets.

VMT is calculated by multiplying (length of road segment) x (the Average Annual Daily Traffic [AADT] that traveled 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 Drivers Data Mart

Data used in this document from the Washington State Department of Licensing (DOL) was gathered from a database known as the DOL Drivers Data Mart. This data is updated daily from several sources that comprise the DOL driver records. The Drivers Data Mart database is a replication of the DOL Driver database, which is the primary data store for the automated systems supporting the DOL Driver Division. The primary purpose of this database is to support ad-hoc queries. The database contains the complete driver records for all Washington drivers.

Administrative Office of the Courts Citation Data

Court and citation data is obtained through the Washington Administrative Office of the Courts (AOC). This data provides information about enforcement and court processing. For example, the number of 'texting while driving' citations is obtained when they are filed with the court. Data gaps exist which must be addressed, such as tracking a single DUI case through the myriad of internal and external data systems the information passes through. The AOC recently began to actively participate in the Traffic Records Committee and the Data Integration Subcommittee to identify and find solutions for these data gaps and develop methods for linking AOC data with WTSC and WSDOT collision data.

Office of Financial Management Population Estimates

Washington has been providing annual population estimates for revenue allocation purposes since the 1940s. Population estimates, including breakouts by county, age, gender and race/ethnicity are made available through the Office of Financial Management (OFM) Population Unit (<http://www.ofm.wa.gov/pop/default.asp>). Intercensal estimates are reconciled with the official U.S. Census Bureau data every decade for postcensal estimates.

Appendix E:

Target Zero Data Definitions

Measures	Fatality Definition	Serious Injury Definition
Priority Level One:	Fatality resulting from a collision that involved...	Serious injury resulting from a collision that involved...
Impaired Driver Involved	any driver 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 in which the investigating officer or Drug Recognition Expert (DRE) indicated impairment by drugs or alcohol as reported in contributing circumstances.
Drug Impaired Driver Involved	any driver with a positive drug result as confirmed by the state Toxicology Laboratory.	<i>(Due to data limitations, including lack of confirmation by toxicology, drug impaired driver involved serious injuries are not reported.)</i>
Alcohol Impaired Driver Involved	any driver with a BAC of 0.08 or higher as confirmed by the state Toxicology Laboratory.	any driver in which the investigating officer or DRE indicated impairment by alcohol as reported in contributing circumstances.
Drinking Driver Involved	any driver with a BAC of any value except zero as confirmed by the state Toxicology Laboratory (also includes alcohol impaired drivers)	any driver in which the investigating officer or DRE indicated impairment by alcohol as reported in contributing circumstances or driver sobriety is reported as "Had been drinking."
Run-Off-the-Road	Derived from CLAS and flagged in FARS.	the primary collision type reported as one parked-one moving, struck fixed object, struck other object, or vehicle overturned AND object struck is NOT overhead sign support, closed toll gate, railway crossing gate, reversible lane control gate, underside of bridge, drawbridge crossing arm gate, falling rock or tree fell on vehicle, fallen rock or tree hit by vehicle, mud or landslide, snow slide, ridden domestic animal, animal-drawn vehicle, not stated, fallen rock on vehicle (on the road), fallen tree hit by vehicle (on the road), or miscellaneous object or debris on road. Exclude the primary collision type of vehicle overturned when coupled with specific impact locations (state routes only until 2010) and exclude those with corresponding junction relationships of described in the intersection definition.
Speeding Involved	any driver exceeding the posted speed limit or driving too fast for conditions at the time of the collision as indicated by the investigating officer.	any driver exceeding the posted speed limit or driving too fast for conditions at the time of the collision as reported 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.

Measures	Fatality Definition	Serious Injury Definition
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.
Intersection Related	Derived from CLAS and flagged in FARS.	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.
Priority Level Two:	Fatality resulting from a collision that involved...	Serious injury resulting from a collision that involved...
Unrestrained Vehicle Occupant	any fatal vehicle occupant whom was not using a restraint or was improperly restrained as indicated by the investigating officer.	any seriously injured occupant of a passenger car, pickup, panel truck, or vannette under 10,000 lbs. in which the officer reported no restraints used.
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.	N/A – Driver license status not available in serious injury data.

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Measures	Fatality Definition	Serious Injury Definition
Opposite Direction	Derived from CLAS and flagged in FARS.	a collision type reported as from opposite direction; from opposite direction moving/ stopped head on; or from opposite direction sideswipe and excluding cases if the junction relationship was reported as at intersection and related; intersection related but not at intersection; at driveway; at driveway within major intersection; entering roundabout; circulating roundabout; exiting roundabout; at roundabout but not related; or traffic calming circle.
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).
Priority Level Three:	Fatality resulting from a collision that involved...	Serious injury resulting from a collision that involved...
Older Driver Involved (age 75+)	any driver age 75 years or older.	any driver age 75 years or older.
Heavy Truck Involved	Derived from CLAS and flagged in FARS.	any vehicle that also has a vehicle classification of trailer with GVWR of 10,001 lbs. or more, single vehicle with GVWR of 26,001 lbs. or more, or single vehicle of 26,000 lbs. or less-CDL required or a commercial vehicle supplement to the collision report; OR a vehicle type reported as 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, 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 with the following attributes reported in the contributing circumstances: apparently asleep or apparently fatigued.
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).

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Measures	Fatality Definition	Serious Injury Definition
Work Zone	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	sequence of events coded as animal.	a collision type reported as non-domestic animal (2008 and prior) or a collision 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 collision type reported as train struck moving vehicle; train struck stopped or stalled vehicle; vehicle struck moving train; or vehicle struck stopped train.
Other Measures:	Fatality resulting from a collision that involved...	Serious injury resulting from a collision 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.	N/A – federal functional class missing for collisions 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.	N/A – federal functional class missing for collisions occurring within city limits.
State Routes/ Jurisdiction	route signing coded as interstate, U.S. highway, or state highway.	a report classification of state route.
City Routes/ Jurisdiction	Derived from CLAS and flagged in FARS.	a report classification of city street OR a collision 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	route signing coded as county road.	a report classification of county road.
Miscellaneous Trafficways	route signing coded as local street-frontage road, other, or unknown.	a report classification of miscellaneous trafficway.

Appendix F: Strategy Effectiveness Criteria

Strategies listed in Target Zero are given a designation of Proven, Recommended, or Unknown as described in the table below. A new process in this Target Zero update was to review and justify every designation given to a strategy. For this review process, three main resources were chosen to serve as the foundation for the designations:

- *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices* – 7th Edition 2013
- *Report 500 Series* from the National Cooperative Highway Research Program
- Crash Modification Factors Clearinghouse

Strategy Effectiveness	Definition	Countermeasures That Work (CTW)	NCHRP 500 Report	Crash Modification Factors (CMF) Clearinghouse
Proven (P)	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 (R)	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.	**** = 11-13 quality points *** = 7-10 quality points
Unknown (U)	Limited evaluation evidence, or experimental	** Effectiveness still undetermined; different methods of implementing this countermeasure produce different results OR *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

These sources (CTW, NCHRP 500, CMF Clearinghouse) were reviewed for the strategies identified by our statewide partners. If the strategies were found, designations were adopted according to the table above. In some instances, our strategies are slightly modified to be more specific to Washington State, but they still aligned with the strategies in these sources and are therefore designated the same.

If a strategy was not found in one of the three primary sources, then further evaluation was conducted in the following order:

- Was the strategy supported with published, favorable outcomes in the form of a metastudy (a review of several related studies for methodological strength and consistent outcomes)? These strategies were designated Proven with META as the source.
- Was the strategy supported by extensive literature but lacks a metastudy? 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? 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 in a previous bullet, 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



Appendix G: Virtual Appendix

<http://www.wtsc.wa.gov/statistics-reports/crash-data/>

The success of the Target Zero plan is dependent on local participation. And local efforts are most successful when driven by local data. Though we can't include community-by-community data in this publication, it is available online as an extension of the Target Zero plan at <http://www.wtsc.wa.gov/statistics-reports/crash-data/>.

The online information highlights which factors are contributing to the most fatalities and serious injuries broken down by local areas. Sometimes a community will find a state priority – such as Run-Off-the-Road – is a lesser issue for their community, while another area may be near the top.

Data is broken down by local areas – Regional Transportation Planning Organizations (RTPOs), counties and cities with populations over 30,000. This local data is compared to state statistics. Information is updated regularly and can be found by accessing the "Traffic Safety Priorities in Washington State for Local Jurisdictions" link on the Crash Data page of the Washington Traffic Safety Commission website.

The community specific data will help you prioritize local and regional safety projects and programs, and assist in developing a localized Target Zero plan. Access this rich collection of online data and target your efforts on the most pressing local issues on your community's path to achieving zero deaths and serious injuries by 2030.



Special Thanks!

Hundreds of people were involved in creating the Target Zero plan. At the front of the publication we thanked our state's Traffic Safety Commission members and scores of partners across the state.

The people on this page represent those who really had to roll up their sleeves. For over a year they gathered data, reached out to partners, created meaningful charts, attended meetings, wrote and edited text, and collaborated inside and outside their organizations.

Their commitment to creating a data-driven, easy to understand document was fueled by their desire to realize the goal of zero traffic deaths and serious injuries by 2030.

Thank you, thank you, thank you!!!

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