



# Collision Data and Analysis

## What is the incentive for collecting collision data and why is it important?

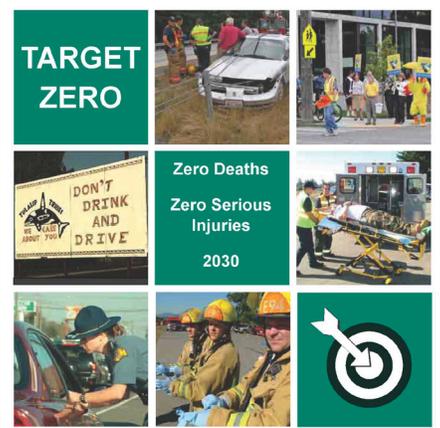
The primary incentive for collecting accurate and timely collision data is to save lives and reduce the number of injuries throughout Washington's entire transportation infrastructure.

This data is extremely important to traffic safety professionals who are tasked with making data driven decisions in order to increase the overall well being of the traveling public. By collecting and analyzing collision data, traffic safety professionals are able to determine problematic locations and apply the appropriate safety countermeasures to these locations. These countermeasures may include use of one or more of the four "E's: Education, Enforcement, Engineering, and Emergency Medical Services.

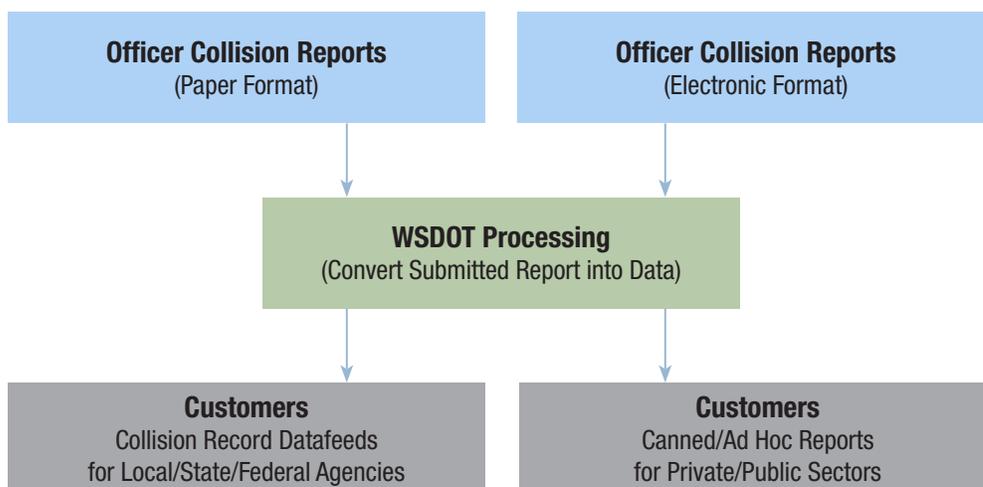
Collision data helps produce effective strategies and serve as a means for reducing fatal and serious injuries as exemplified within the state's Strategic Highway Safety Plan: Target Zero ([www.wsdot.wa.gov/planning/SHSP.htm](http://www.wsdot.wa.gov/planning/SHSP.htm)).

### Washington State's Strategic Highway Safety Plan 2010

Zero Deaths | Zero Serious Injuries | 2030



## How is collision data processed?



Each year, the Collision Data & Analysis Branch (CDAB) of the Statewide Travel and Collision Data Office (STCDO) processes approximately 130,000 collision reports for collisions occurring within the State of Washington, resulting in approximately 100,000 reportable collision records.

The processing effort includes managing, storing, safeguarding, retrieving, and releasing reports of collisions that occur on over 80,000 miles of the state's city streets, county roads, other roadways, and state highways. The PTCR is used by all law enforcement agencies within the state to

investigate reportable collisions that involve an injury or meet the minimum damage threshold of \$700. This can either be done by paper or electronic application. The electronic application allows law enforcement to submit a collision report from the field using applications such as: Statewide Electronic Collisions and Ticketing Online Records (SECTOR) or the Law Enforcement Support Agency's, Enforcer.

Once the reports are submitted, Washington State Patrol (WSP) and CDAB staff review the reports and enter the information derived from them into the Collision Location Analysis System (CLAS) database. Once entered into the CLAS database, the data goes through a stringent Quality Assurance program that involves reviewing some of the submitted reports on a random basis to ensure the output is of the highest quality possible. From there, the data enters into the statewide collision repository for use by the STCDO's customers.

# What information can be found in a collision record and how is it used?

In an average collision there are more than 120 data elements captured, such as:

- ✓ Location
- ✓ Date/Time
- ✓ Collision Type
- ✓ Object Struck
- ✓ Work zone status
- ✓ Vehicle Type
- ✓ Vehicle Actions
- ✓ Traffic Control
- ✓ Helmet Usage
- ✓ Age/Gender
- ✓ Sobriety



- ✓ Driver/Pedestrian/Bicyclist Contributing Circumstances
- ✓ Weather & Lighting Conditions
- ✓ Road Surface Conditions
- ✓ Severity/Injuries
- ✓ Restraint/Airbag status
- ✓ Sequence of Events
- ✓ Miscellaneous Actions
- ✓ Pedestrian/Bicyclist Was Using
- ✓ Pedestrian/Bicyclist Actions
- ✓ And Many More...

Collision data is used to support the needs of private and public sector alike; whether it be a bicycle advocacy group concerned about bicyclist collisions on a specific roadway, media wanting collision data for a hot topic, or a county government reviewing the collisions involving impaired drivers in a rural setting.

These are just some of the ways that collision data is used:

- Collision data is used for determining what safety campaigns should be developed and how effective those programs are. For example, the Washington State Traffic Safety Commission sponsors programs such as "Click it or Ticket". This program helps save lives and reduces injury severity by encouraging seatbelt use.
- Washington's data is an integral part of the Federal Highway Administration's (FHWA) Highway Safety Information System (HSIS). HSIS is composed of nine states that have the highest quality collision, roadway and traffic volume data available throughout the country. Washington's data has been incorporated with HSIS since 1993 and contains some of the more detailed roadway segment inventories of all the HSIS states. Since 1993, Washington's traffic safety data has been used numerous times by national safety researchers from HSIS.
- Through the National Cooperative Highway Research Program's (NCHRP) projects and FHWA's support, a series of guides are being developed to help states and local municipalities develop and implement their own safety plans. Since 2000, Washington's data has also been used in numerous NCHRP projects, i.e., developing guidelines for median design.
- Collision data is extracted for various safety projects and used to perform Before/After Studies. The results of these studies help determine how various safety countermeasures work towards resolving problematic traffic issues, helping to create safer roads for citizens traveling throughout Washington.
- The Washington State Department of Transportation's Safety Program is based upon collision data that helps make data-driven decisions in order to determine appropriate projects submissions to Legislature for approval.
- Injury severity levels are associated with a variety of societal costs. A decline in fatal and serious injuries offers the greatest reduction in terms of societal cost. The data is also used to reduce incidents that cause idling vehicle backups, thereby reducing carbon emissions into the environment.



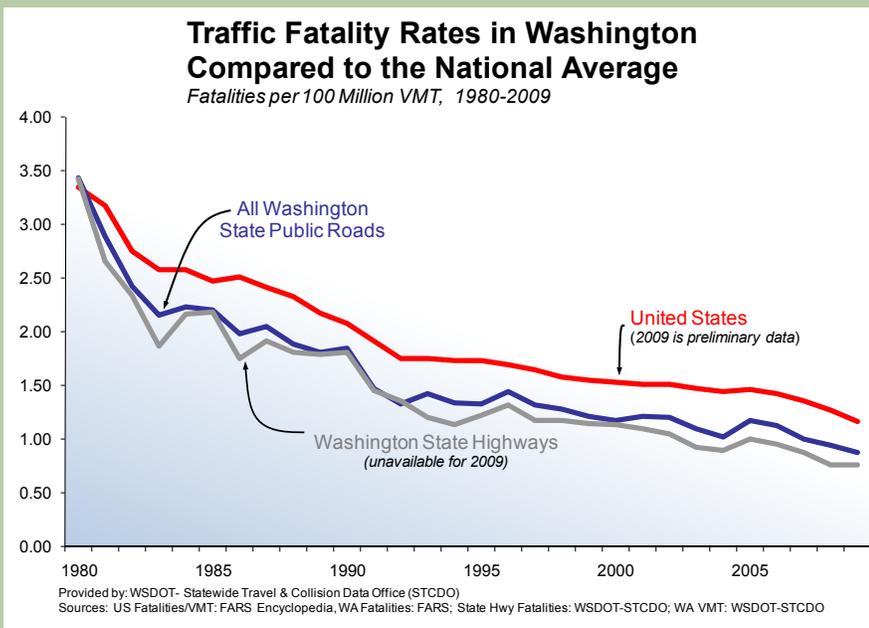
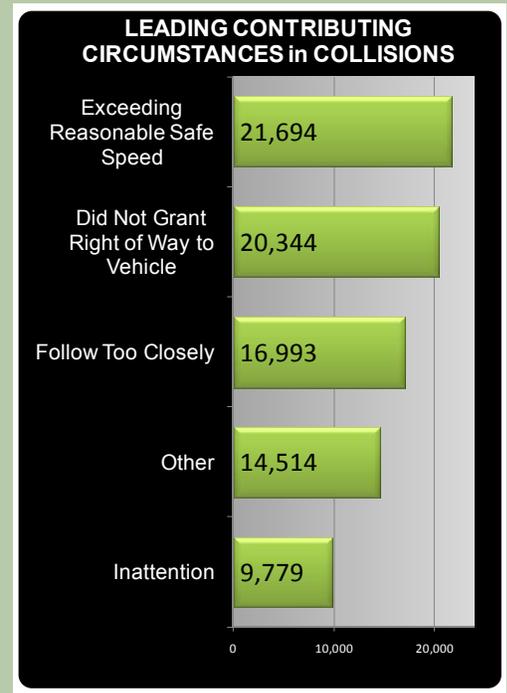
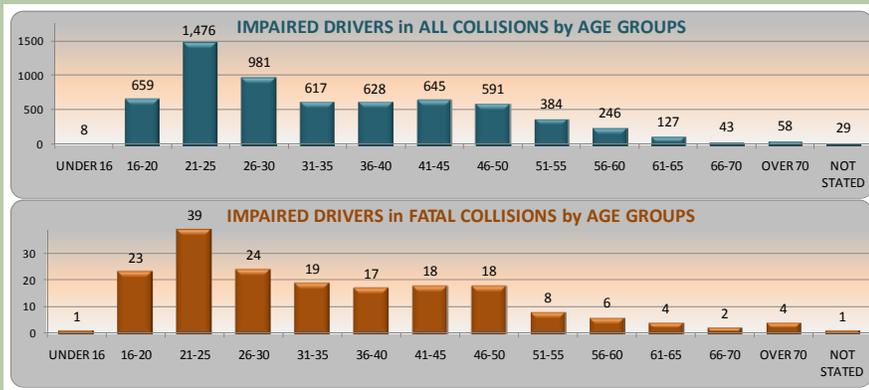
*Before safety improvements were implemented.*



*After safety improvements were implemented.*

## How is the data displayed?

Data is converted into valuable information for a variety of customers. History reports, summary reports, tables and charts/graphs can be produced for a specific location, city, county or the entire state.



## Who are some of the users of collision data?

Collision data is released to a variety of customers, in a variety of formats, for a variety of reasons; below are few examples.

- |  |                                     |
|--|-------------------------------------|
| National Highway Traffic Safety Administration | Federal Highway Administration      |
| Governor's Office                              | Legislature                         |
| Regional Transportation Planning Organizations | Metropolitan Planning Organizations |
| State, County & City engineers                 | WSDOT Risk Management               |
| Attorney General's Office                      | Private Attorneys                   |
| Media  | Consulting Firms                    |
| Research Institutions                          | Tribal agencies                     |
| Commercial businesses                          | Private parties                     |



Emergency responders at the scene of a collision.

## Contact Information

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## Publications

Collision Data Request Form:  
[www.wsdot.wa.gov/mapsdata/tdo/collisiondatarequest.htm](http://www.wsdot.wa.gov/mapsdata/tdo/collisiondatarequest.htm)

Annual Collision Data Summary:  
[www.wsdot.wa.gov/mapsdata/tdo/accidentannual.htm](http://www.wsdot.wa.gov/mapsdata/tdo/accidentannual.htm)



*Vehicles yielding to pedestrians crossing the street.*

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