

An Overview of Traffic Records

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What is traffic records?

- The traffic records office is required by state statute to maintain a database of motor vehicle crashes that occur on all public roads in the state of Arizona
- This data is used by engineers, media, and other agencies for safety studies, identifying high crash locations, trends, etc.

Where the data comes from

- The traffic records office receives crash reports from over 100 law enforcement agencies
- Those crashes which meet the minimum criteria are entered into the Accident Location Identification Surveillance System (ALISS) database
- The ALISS database has data going back to 1991 and is stored on an SQL server

The crash report

- After the officer completes the crash report, the agency will send it to the traffic records office for processing
- Prior to 2011, all crash reports were sent in paper form and manually entered by our staff into the ALISS database
- Also, prior to July 2012, all paper crash reports were microfilmed

Electronic reporting

- Starting in 2011, ADOT worked with many Law Enforcement agencies to move towards electronic reporting to save time and money
- ADOT selected the Traffic and Criminal Software (TraCS) as the primary system to submit electronic crash reports
- The Arizona Department of Public Safety (DPS) Highway Patrol was the first agency to test and successfully use this software

Electronic reporting

- By the summer of 2012, Arizona DPS was sending almost 100% of their crash reports electronically via TraCS, therefore saving time and money for DPS and ADOT in terms of manually entering and microfilming/scanning the paper crash reports
- DPS and ADOT continue to work together to demonstrate and showcase the TraCS software to other law enforcement agencies

Electronic reporting

- There are now 3 other agencies that use the TraCS software
 - Maricopa County Sheriff's Office
 - Payson PD
 - Show Low PD
- All of these agencies are close to or have achieved 100% electronic reporting

Electronic reporting

- Many other agencies have used a private vendor such as Intergraph, New World, or Brazos to successfully submit crash reports electronically
- The agencies that are currently submitting reports electronically via a private vendor include:
 - Phoenix, Tucson, Mesa, Peoria, Yuma, Pima County Sheriff's Office

Electronic reporting

- Many other agencies are currently testing or interested in electronic reporting using TraCS or a private vendor
- Some agencies such as Surprise PD and Glendale PD are in the testing phase right now and should start submitting reports electronically in the next few months

Paper reports

- For those agencies which are still sending paper reports, these are processed by our data entry staff
- Starting in July of 2012, all paper reports are scanned and stored in a program called OnBase so they can be easily accessed by our staff and other ADOT staff who may need to review the crash reports (the crash reports are not given to the public or law firms)

Paper reports

- After the paper reports are scanned, they are manually entered into ALISS by our staff
- All of the information on the crash report is not entered into ALISS, only the relevant information pertaining to the crash
- In 2015, paper reports accounted for 41% of all crash reports while the remaining 59% were sent electronically

Safety Data Mart

- The data in ALISS that comes from the crash reports is transferred into an application called the safety data mart (SDM)
- The SDM was developed by ADOT ITG in 2008 as a tool for ADOT staff and other law enforcement or government agencies to be able to easily retrieve the crash data
- Please note that the SDM does not contain personal identifying information

Safety Data Mart

- Any law enforcement or government agency that enters into a data sharing agreement with ADOT can have access to the SDM so they can retrieve their data
- Also, agencies can have agreements with other agencies to share the data that comes from the Safety Data Mart
- For example, if Phoenix wants to have access to crash data for Glendale, this is acceptable as long as both agencies have agreed to share their data

Data Access Agreements

- Data access agreements must be renewed every 5 years
- A special data access agreement is available for tribal agencies
- The Gila River Tribe is the only tribal agency at this time which has a data access agreement and they are the only tribal agency which sends crash reports to ADOT on a regular basis

What data is collected in ALISS?

- As mentioned before, only certain information from the crash report is entered into ALISS
- The data that is collected from the crash report can be broken down into 3 general categories
 - Incident
 - Unit
 - Person

Incident data

- The incident level data is the information which pertains to the entire crash:
 - Weather conditions
 - Lighting conditions
 - Location (includes lat/long if valid)
 - Accident date/time
 - Type of intersection and traffic way
 - Manner of crash impact (rear end, sideswipe, etc.)
 - First harmful event
 - Total fatalities and injuries
 - Fire/EMS incident number (if applicable)
 - Injury severity of crash (fatal, injury, PDO)

Unit data

- The unit data pertains to each vehicle, pedestrian, or pedalcyclist that is involved in the crash
 - Body style of vehicle (4-door sedan, truck tractor, station wagon, etc.)
 - License plate number and state
 - Make and year of vehicle
 - Travel direction prior to crash
 - Unit action (going straight, turning left, crossing road, parked, etc.)
 - Roadway alignment and grade
 - Lane of travel (HOV, left turn lane, right turn lane, 2-way left turn lane, etc.)
 - Type of traffic control device (stop sign, traffic signal, railroad crossing, etc.)
 - Sequence of events
 - Road surface condition (wet, dry, snow, etc.)
 - Other contributing circumstances (debris, tire failure, sun glare, etc.)
 - Distracted driving behavior (added to crash report in July 2014)
 - Physical condition (alcohol, drugs, etc.), violations, and citations
 - Posted speed limit and estimated speed (vehicles only)

Person data

- The person data pertains to each driver, pedestrian, pedalcyclist, and passenger that is involved in the crash
 - Age and Gender (DOB is used to calculate age)
 - Type of injury (fatal, incapacitating, possible, etc.)
 - Safety device used (helmet, seatbelt, airbag deployed, etc.)
 - Driver License state, class, endorsement, and restrictions
 - Seat position (passengers only)
 - Ejection/extraction (if applicable)
 - Non-motorist location (pedestrian/pedalcyclist only)
 - Transport information for injured persons (name of hospital, ambulance, air evac, etc.)

Nevada vs. Arizona crash reports

- The Nevada crash report is very similar to the Arizona crash report in terms of what information the officer collects in the field
- Please note that this does not pertain to the type of data Nevada collects from the crash report and stores in their database compared to the ALISS database for Arizona

Incident data

- Some key differences on the Nevada crash report compared to Arizona in terms of the incident data
 - Notation of urban or rural crash
 - Type of report (preliminary, supplement, etc.)
 - Number of occupants restrained
 - Roadway surface (asphalt, concrete, etc.)
 - Paddle markers (not sure what that is)
 - Total thru lanes and all lanes
 - Average roadway width and paved shoulder
 - Roadway grade percentage
 - Location of first harmful event
 - Pavement markings and type
 - More detailed codes for collisions with animals

Unit data

- Some key differences on the Nevada crash report compared to Arizona in terms of the unit data
 - First contact of vehicle and damage areas
 - Notation of most harmful event
 - Traffic Control device section more detailed than Arizona
 - Notation of at-fault and non-contact vehicles
 - Override/underride of vehicle
 - Extent of damage
 - Distance traveled after impact
 - Use of aggressive/reckless driving for vehicle factors
 - More detailed description for non-motorist (skater/wheelchair)
 - More detailed choices for safety equipment for non-motorist
 - Bike Lane/path descriptions
 - Non-motor vehicle descriptions

Person data

- Some key differences on the Nevada crash report compared to Arizona in terms of the person data
 - Airbag code and airbag switch
 - Better descriptions for occupant restraints in terms of *improper* usage
 - Location of injury (head, neck, face, etc.)
 - Distracted driving behavior not as detailed compared to Arizona
 - Driver License Status more detailed than Arizona
 - First contact area for pedestrian and pedalcyclist
 - Method of determination for impairment only collected for fatal reports for Arizona and not all reports
 - Suspected Impairment not used on Arizona form

FARS

- The Fatality Analysis Reporting System (FARS) is part of the National Highway Traffic Safety Administration (NHTSA)
- Every state has at least 1 FARS analyst
- Arizona has 2 FARS analysts who are part of the traffic records office
- The FARS analysts work closely with traffic records to make sure the data is consistent between the 2 databases (FARS and ALISS)

FARS

- FARS collects many more data elements than what is contained on the crash report
- Most of these elements are contained in the narrative of the crash report
- FARS also collects the BAC and drug results from the medical examiner (or other source) to determine alcohol, drug, or medication involvement in a fatal crash

FARS

- For more information on FARS and the type of data they collect, please visit their websites
 - <http://www.nhtsa.gov/FARS> (general information)
 - <http://www-fars.nhtsa.dot.gov/Main/index.aspx> (FARS encyclopedia)

Questions

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