NHTSA Request for Information

Data Standardization and Modernization of Information Technology

(1) What are the State's current methodologies for collecting and standardizing statewide crash data electronically in a central repository?

Minnesota uses an electronic crash reporting platform called MNCrash. All crashes investigated by law enforcement are reported via this system, which was developed to align as closely as possible with MMUCC crash data collection recommendations, while also meeting the needs of law enforcement officers and Minnesota crash data users.

(2) NHTSA relies on MMUCC to establish a standardized data set. What steps are required for the State to meet this standardization?

While there are no requirements to meet MMUCC standards, MNCrash was based on these standards and continued efforts are being made to align MNCrash data collection as closely as possible to the most recent edition of MMUCC (edition 5, published in 2017). We are currently funding a project that seeks to identify changes to MNCrash that would make our crash data system align more closely with the most recent MMUCC guidelines, and will evaluate the efficacy and usability of these proposed changes. This project will begin July 1, 2022.

 (a) Please provide an estimated timeline to implement MMUCC standardization.

While MNCrash already aligns closely with MMUCC standards, our upcoming aforementioned project (which will be conducted by the University of Minnesota), will bring MNCrash even closer to MMUCC standardization. The user research portion of the project will begin July 1,' 2022 with an anticipated completion date in late winter or spring of 2023, after which the system development stage will begin, during which time the identified changes will be made to the MNCrash platform. The duration of this portion of the project will depend on the extent of the changes to the system and resources (time and funding) available.

(b) What would it cost the State to move toward this data standardization?

The user research portion of our MMUCC-MNCrash updates project will be approximately $115,000. The development portion will likely be much more, given the specialized resources required to implement the changes. It would not be possible to give an estimate before a definite scope of work is determined.

(3) If the State does not have a centralized statewide crash data repository, describe what the State will need to establish the infrastructure; processes and procedures; information technology requirement; and training, to support this data modernization effort?

N/A

(4) Explain what the State will need to establish the infrastructure; processes and procedures; information technology requirement; and training to implement an electronic data transfer protocol.

N/A: Minnesota is already an EDT state and transfers data to NHTSA on a regular basis as outlined in an MOU between Office of Traffic Safety and NHTSA , effective December 2020.

(5) How long would it take for the State to establish a centralized statewide crash data repository and to implement an electronic data transfer protocol?

N/A: See above

(6) What are the State's estimated costs associated with establishing a centralized statewide crash repository to support an electronic data transfer protocol?

N/A: See above

(7) Explain the challenges associated with establishing a centralized statewide crash repository that supports an electronic data transfer protocol. Elaborate on the State's needs to overcome those challenges.

Minnesota has managed to successfully establish a centralized statewide crash repository that supports data transfer protocol. The primary requirements for doing so successfully were funding, time, expertise, and education/training.

Law Enforcement Electronic Crash Reporting

(8) What percentage or number of the State's law enforcement agencies collect motor vehicle traffic crash information using an electronic crash report/records management system?

All of crashes reported to DPS are reported through our electronic crash reporting system, MNCrash. We do not accept paper reports, and based on crash statistics, we can quite certain that nearly all crashes investigated by LEOs are reported in MNCrash. However, we cannot track crashes that are not reported to the state, and we do know that some law enforcement agencies do not report property damage crashes. So, there most certainly are some crashes that occur on Minnesota roadways that go unreported, though it is impossible to provide statistics.

(a) Are all law enforcement agencies in the State collecting motor vehicle traffic crash information via an electronic crash report/records management system using the same application?

Yes, all motor vehicle traffic crashes are reported using the MNCrash system (there is an option to use the web-based application or the desktop version).

(b) For law enforcement agencies collecting motor vehicle traffic crash information using an electronic crash report/records management system, what application is used?

MNCrash

(9) What percentage or number of law enforcement agencies solely use paper crash reports in the crash reporting process?

Paper crash reports are not used. If any agencies use paper crash reports unbeknownst to DPS, it is not an acceptable method of crash reporting, which is mandated by Minnesota Statute 169.09 Subd. 8.

(a) If so, are these paper reports coded into the centralized statewide crash repository? N/A

(b) Describe any law enforcement's reservations for participating in electronic crash reporting to document motor vehicle traffic crash information?

When MNCrash went into production, it was a replacement for an electronic application that had been used for years by Minnesota State Patrol, and LE agencies were, for the most part, anxious for an updated application with improved functionality, and therefore embraced MNCrash. Local PDs and Sherriff's departments also widely welcomed the change to MNCrash, although there has been resistance from some tribal police departments.

(c) Specify the needs and costs for law enforcement agencies to adopt electronic-crash reporting to document motor vehicle traffic crash information?

For State Patrol, the hardware and connectivity to accomplish electronic crash reporting was already in place so there was no additional expense to transition to their current crash reporting application. Some of the smaller, local agencies incurred some start up costs, mostly hardware, and OTS provided grants to offset these costs.

Data Management

(10) Does the State have a conceptual or notional design of how the data would flow into a centralized statewide crash data repository? If so, please elaborate.

Currently, all of our crash data is collected via the MNCrash platform and stored on a SQL Server database. Public data, with personal identifying information redacted, is hosted on a separate DMZ. A variety of stakeholders receive data transmissions from MNCrash via:

1- Web Service queries (i.e. pulling data from MNCrash)

or

2- MNCrash sending data to their Web Services (i.e. pushing data to their system)

or

3- MNCrash uploading data files to a DPS Secure FTP Server and pulled by their system

(11) If the State currently participates in NHTSA EDT protocol, does the State have written operating procedures for managing the data flow? If so, please submit the data flow or the operational structure.

Crash data is sent on an hourly basis to NHTSA. Process: REST API Web Service is selected for data transport. MNCrash System to send each new or updated Crash Record data to a Web Service exposed by NHTSA where it will receive the data and will be responsible for updating MnDOT applicable internal Systems.

(12) Does the State, in its crash data, distinguish between crash types between self-reported and police reported crashes?

Citizens no longer submit crash reports. That statute (169.09 Subd. 7) was repealed in July, 2021. OTS has always only collected police reported crash data.

(13) Does the State include variables to identify State-reportable vs. non-reportable crashes?

Yes. Crash Status is the field in which a value of "accepted-not reportable" is available. Fatal crashes are analyzed by FARS analysts, and fatal crashes that are considered not reportable are manually designated as such in the Crash Status field. Furthermore, some non-fatal crashes are automatically assigned this status based on certain criteria (formerly, PDO crashes under $1000 and parking lot crashes; the under $1000 criterion is being phased out due to the repealing of MN statute 169.09 subd. 7).

Data Accessibility to the Public

(14) Please provide recommendations on the format types for publicly available State crash data.

Minnesota maintains approved annual public 'data dumps' available for members of the public to access upon request via an FTP server. These files are tab delimited text documents. In addition, Minnesota recently launched a public data query site (see question #15 below).

(15) What State products and services that include State crash data does the State find are most helpful to the public?

In February 2022, OTS launched a public crash data query site, which makes public crash data easily accessible and widely available for public queries. Data is transmitted daily from MNCrash to a separate DMZ, with private data redacted. This public platform allows traffic safety stakeholders and any interested party to access up-to-date Minnesota crash data in a user-friendly format.

(16) Please advise if the State is interested in modernizing and standardizing its State crash system?

Minnesota is always seeking to enhance our crash reporting system and make strides towards standardization, as well as data integration. We have several projects currently in place working towards those ends, including the aforementioned MMUCC MNCrash Updates project, CODES (The Crash Outcome Data Evaluation System), and TAMS (Traffic Asset Management System).