

Maryland Traffic Records Strategic Plan 2011-2015



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Acronym Key

| | |
|---------|---|
| AADT | Annual Average Daily Traffic |
| BAC | Blood Alcohol Content |
| CMV | Commercial Motor Vehicle |
| CODES | Crash Outcome Data Evaluation System |
| DoIT | Department of Information Technology |
| eMAARS | enhanced Maryland Automated Accident Reporting System |
| FARS | Fatality Analysis Reporting System |
| FFY | Federal Fiscal Year |
| GIS | Geospatial Information System |
| GOCCP | Governor's Office of Crime Control and Prevention |
| HISD | Highway Information Services Division |
| I-TMS | Internet Traffic Monitoring System |
| MIEMSS | Maryland Institute for Emergency Medical Services Systems |
| MMUCC | Model Minimum Uniform Crash Criteria |
| MOU | Memorandum of Understanding |
| MPCTC | Maryland Police and Correctional Training Commissions |
| MSCAN | Maryland Safety and Crash Analysis Network |
| MSP | Maryland State Police |
| MSP-CRD | Maryland State Police Central Records Division |
| MSP-ITD | Maryland State Police Information Technology Division |
| MVA | Motor Vehicle Administration |
| NEMESIS | National Emergency Medical Services Information System |
| NHTSA | National Highway Traffic Safety Administration |
| PM | Performance Measure |
| RA | Reporting Agency |
| SERO | Safety Equipment Repair Order |
| SHA | State Highway Administration |
| SHSP | Strategic Highway Safety Plan |
| TRIS | Traffic Records Information System |
| TRSI | Traffic Records Safety Impact |
| TRSP | Traffic Records Strategic Plan |
| TRCC-EC | Traffic Record Coordinating Committee – Executive Council |
| TRCC-TC | Traffic Record Coordinating Committee – Technical Council |
| TRIPRS | Traffic Records Improvement Program Reporting System |
| NSC | National Study Center for Trauma and EMS |
| VIN | Vehicle Identification Number |
| XML | Extensible Markup Language |

Executive Summary

The successful implementation of traffic safety programs must involve the combined efforts of a number of organizations. Comprehensive crash, driver, vehicle, highway, traffic, enforcement, emergency medical services, and health services information linked together and provided to the safety community are necessary for efficient planning, problem identification, management and evaluation of statewide coordinated highway safety activities. Most routinely collected and accessible state traffic safety data in Maryland have been initially collected and maintained for agency-specific purposes without full consideration of the potential for integrating these data.

Existing safety data issues include: undervalued, incomplete, or under-reported data; non-uniform, missing or inaccurate data; and data that are not timely or accessible. Safety data must be timely, complete, accurate, uniform, integrated and accessible, and traffic records data for all agencies with representation on the in Maryland Traffic Record Coordinating Committee (TRCC) are integral to the completion of their shared mission to improve citizens' quality of life by reducing the number of fatalities and injuries and the severity of injuries related to road trauma.

The members of the TRCC recognize the need for and the value of a high quality and responsive traffic safety information system to inform safety decisions, and to facilitate communication, coordination, cooperation and partnership among stakeholders. The traffic safety information system is critical to ensuring the most effective use of available resources. The purpose of the TRCC is to continually review and assess the status of Maryland's traffic safety information system and its components. The TRCC oversees the development and periodic update of a strategic plan for traffic records systems to better serve the public and private sector needs for traffic safety information, to identify technologies and other advancements necessary to improve the system, and to support in the coordination and implementation of needed or desired system improvements. The TRCC also provides a forum for the exchange of information regarding safety data among the traffic safety community.

The stakeholders of the TRCC make unique contributions to various users of the traffic safety information systems. These stakeholders will continue to cooperate with efforts to improve the systems in ways that are available to them, and agree to the terms outlined in the Maryland Traffic Records Coordinating Committee Memorandum of Understanding (MOU) and Charter (Appendix F). The TRCC will play a major role in insuring that a statewide traffic records information system implementation is successfully completed.

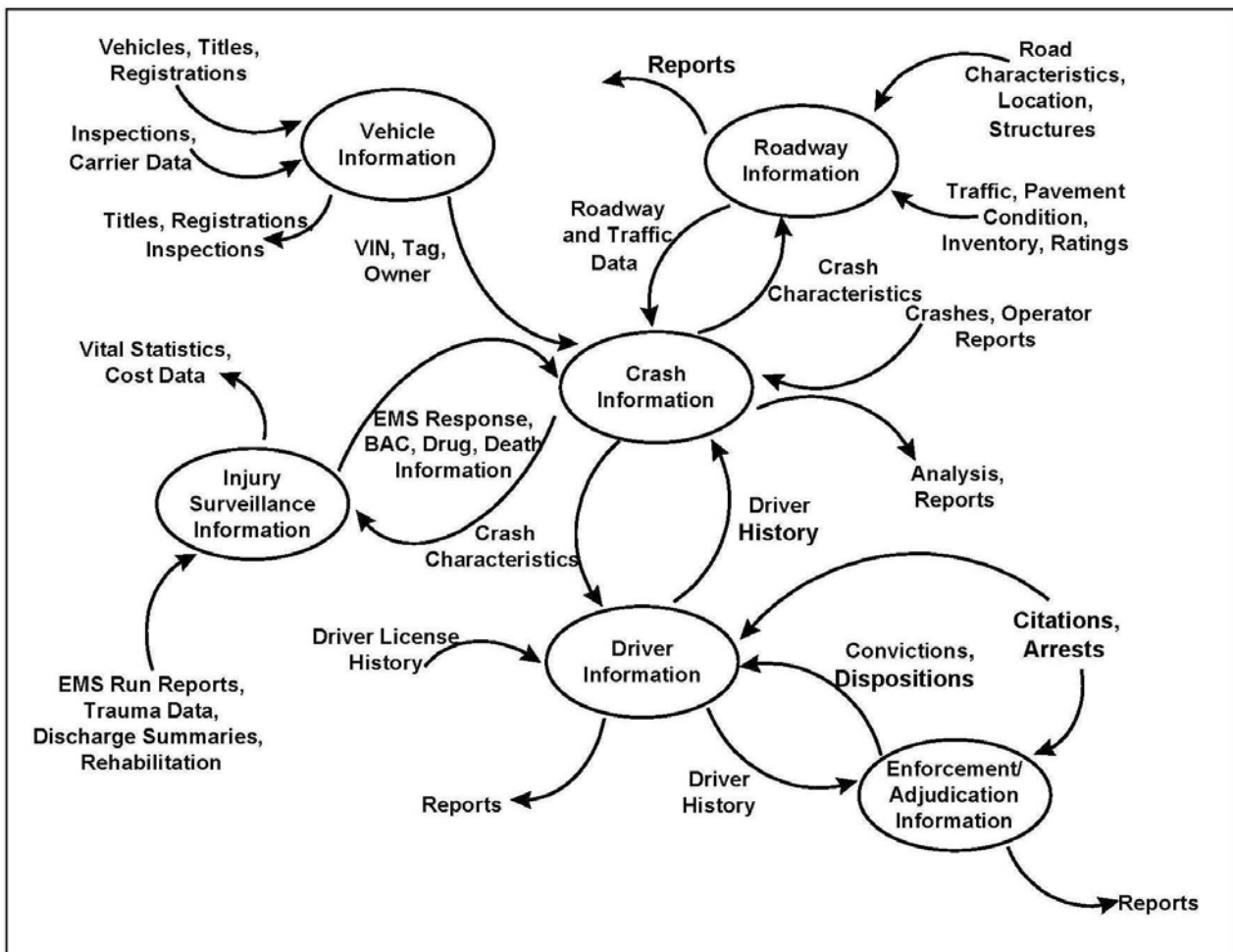
Beyond the MOU, the TRCC exists and operates as part of the statewide support for the Strategic Highway Safety Plan (SHSP), which is a five-year statewide plan to prevent the unnecessary tragedies of deaths and injuries on Maryland roadways. The combined efforts of the policy leaders, decision-makers, and technical experts of the TRCC are crucial to improving and continuing the ensured safety of Maryland's most precious asset: its people.

Traffic Records System – An Overview

Maryland maintains traffic records information systems in compliance with federal recommendations and state requirements to support system stakeholder needs and the management of Maryland highway safety programs. Figure 1 represents the overall goal for integrating individual state data systems to coordinate and develop a comprehensive traffic records information system.

Maryland’s traffic records program is moving toward this model to support model the programs outlined in the SHSP. The TRCC and the traffic records projects have set goals (objectives) and performance measures to improve individual data system timeliness, completeness, accuracy, uniformity, accessibility, and integration as a means for establishing a statewide traffic records information system.

Figure 1. Model of Distributed Data Processing in a Traffic Records Information System (NHTSA Advisory)



Safety Data System Benchmarking and Goals

Goals are identified in the objectives for each component of the traffic records information system—objectives derived based on Assessments, TRCC evaluation and input, and state agency-identified needs. The TRCC sets performance measures for priority objectives identified in the TRSP and are reviewed periodically throughout the calendar year. Systems showing progress, such as increased timeliness and completeness, are monitored and reports are submitted to NHTSA at least annually and throughout the year as measures are taken and entered into the Traffic Records Improvement Program Reporting System (TRIPRS).

Project Identification and Prioritization Process

The Traffic Records Strategic Plan objectives (Appendix A) are based on the Traffic Records Assessment, Crash Data Improvement Program (CDIP), and other needs determined by members who comprise the TRCC Executive and Technical Councils. The prioritization and selection process for projects in need of funding includes an evaluation of the project’s ability to meet the objectives in Tables 1 and 2. The objectives in the tables below are updated annually.

Table 1. System ID/Performance Measure Matrix

| System | Timeliness | Accuracy | Completeness | Uniformity | Integration | Accessibility | Other |
|-----------------------|----------------------------|--------------|-----------------------------------|----------------|-------------|---------------------|---|
| Crash | CRA01, CRA19, CRA20, CRA27 | CRA04, CRA14 | CRA02, CRA03, CRA04, CRA13, CRA20 | CRA15 | CRA40 | CRA21, CRA28, CRA29 | CRA10, CRA18, CRA22, CRA23, CRA30, CRA33, CRA38, CRA39, CRA42 |
| Citation/Adjudication | | CIAD05 | CIAD03 | CIAD04, CIAD08 | | | |
| ISS | ISS04 | | ISS03, ISS09 | ISS07 | ISS10 | | ISS05 |
| Vehicle | | | | | | | |
| Driver | | | | | | | |
| Roadway | | | | RDWY04 | | | |

Table 2. Administrative Objectives

| System ID | FFY11 | FFY12 | FFY13 | FFY14 | FFY15 | FFY16 |
|-----------|---|--|--|--|--|--|
| TRCC | TRCC02, TRCC03, TRCC10, TRCC 11, TRCC12, TRCC16, TRCC19 | TRCC02, TRCC03, TRCC04, TRCC12, TRCC13, TRCC15, TRCC16, TRCC19, TRCC20, TRCC21 | TRCC02, TRCC03, TRCC04, TRCC05, TRCC08, TRCC09, TRCC12, TRCC13, TRCC15, TRCC16, TRCC18, TRCC19, TRCC21 | | | |
| CODE | CODE01, CODE02, CODE03, CODE04, CODE05, CODE06 | CODE01, CODE02, CODE03, CODE04, CODE05, CODE06 | CODE01, CODE02, CODE03, CODE04, CODE05, CODE06 | CODE01, CODE02, CODE03, CODE04, CODE05, CODE06 | CODE01, CODE02, CODE03, CODE04, CODE05, CODE06 | CODE01, CODE02, CODE03, CODE04, CODE05, CODE06 |

Project Funding Sources

Proposed projects are evaluated by the TRCC to ensure they meet the priority objectives in this Plan. Projects are also selected based on funding availability. Supporting funds for these projects and its projects may be obtained through several sources. (Specific funding for each year will be indicated in the TRIPRS Report (Appendix E)).

Table 3. Funding Sources

| Funding Sources |
|--|
| National Highway Traffic Safety Administration (NHTSA) 402 |
| National Highway Traffic Safety Administration 408 (carryover) |
| National Highway Traffic Safety Administration 405c |
| Federal Motor Carrier Safety Administration (FMCSA) |
| Governor's Office of Crime Control and Prevention (GOCCP) |
| U.S. Department of Justice (DOJ) |
| Federal Highway Administration |
| State Matching and Investing from General Funds |

Strategic Plan Approvals

The Strategic Plan is first reviewed and approved by the members of the TRCC Technical Council. Once consensus is reached, the Plan is then presented to the TRCC Executive Council for their review and approval. Both Councils document approval in the meeting minutes.

TRCC Overview

The purpose of the TRCC is to continually review and assess the status of Maryland's traffic safety information systems and its components; oversee the development and periodic update of a Strategic Plan for traffic records that serves the public and private sector needs for traffic safety information, and identifies technologies and other advancements necessary to improve the system; promote, support and assist in the coordination and implementation of needed or desired system improvements and; and provide a forum for the exchange of information regarding safety data among the traffic safety community.

TRCC Duties and Responsibilities

- Provide the primary point of leadership, planning, policy setting, and accountability for the traffic safety information systems activity within the State of Maryland.
- Provide a forum for review and endorsement of programs, regulations, projects and methodologies (excluding specific vendor products) to implement the improvements identified in the implementation plan.
- Review programs, regulations, projects, and methodologies for conformance with the mission and goal of the TRCC and for conformance with national policy on traffic safety information systems.
- Provide executive guidance and coordination for programs, projects, and regulations as they become operational.
- Review the Strategic Plan annually to determine if objectives are being met and to update the plan as needed.

(The complete duties and responsibilities of the TRCC are found in the *TRCC MOU and Charter*.)

TRCC Membership

TRCC-Executive Council Chairperson

| | |
|----------------|---------------------------------------|
| Name: | Milton Chaffee |
| Title: | Administrator |
| Agency: | Maryland Motor Vehicle Administration |

TRCC-Technical Council Co-Chairs

| | | |
|----------------|--|--|
| Name: | Captain Danielle Bradshaw-Lee | Diedra Parish |
| Agency: | Maryland Transportation Authority Police (MDTAP) | Maryland Transportation Authority Police (MDTAP) |

(The complete roster of the TRCC is maintained separately and is submitted to NHTSA annually in the HSP.)

Appendix A – Traffic Records Strategic Plan Objectives

Traffic Records Strategic Plan Objectives

Note: Performance Measures have not been developed for every objective. Measures will be reviewed and developed annually in collaboration with traffic records system project managers, following guidelines set forth by NHTSA (along with FHWA and FMCSA recommendations), and tracked in NHTSA's Traffic Records Improvement Program Reporting System (TRIPRS).

Objectives ~~crossed out~~ are either complete or part of an active program.

| Key |
|--|
| (TRA 1-A) = 2010 Traffic Records Assessment Recommendation and corresponding section |
| (CDIP) = 2010 FHWA Crash Data Improvement Program Recommendation |
| (SHSP) = 2011–2015 Statewide Strategic Highway Safety Plan Strategy |
| (RSDCA) = FHWA Roadway Safety Data Capability Assessment (March 22, 2012) |

Traffic Records Coordinating Committee Objectives

- TRCC01. ~~Establish a subcommittee to coordinate and enhance current GPS/GIS technologies related to the traffic records system between stakeholders and to coordinate with other statewide GIS committees (MSCIC, iMap Technical Committee, SHA GIS Committee).~~
- TRCC02. Evaluate federal requirements (e.g., MMUCC, NEMESIS, MIRE) and define the critical data elements needed for Maryland to enhance the current traffic records system.
- TRCC03. Increase membership and participation on the TRCC Councils. (TRA 1-A, TRA 1-F)
PM01: Number of new TRCC Technical members recruited
PM02: Number of new TRCC Executive members recruited
PM03: Average number of TRCC Technical members in attendance (annual)
PM04: Average number of TRCC Executive members in attendance (annual)
- TRCC04. Catalog and publish data release policies and/or data sharing agreements from all partners with traffic record data, specifically identifying rules that allow intra- and inter-agency access, and public access.
- TRCC05. Compile and publish quality control standards for the traffic records system, including policies, procedures, data quality, and accuracy measures.
- TRCC06. Document and publish standards related to the release of sensitive and protected data (including HIPAA concerns, personal identifiers, location-specific data, etc.).
- TRCC07. Implement procedures to ensure that any technology projects/procurements that have potential impact on existing or planned traffic records systems by requiring agencies to inform the TRCC prior to any TRSI procurement submission.
- TRCC08. Develop and document compatibility and linkage protocols among data systems. (RSDCA 4A)
- TRCC09. Specify integration parameters among established stakeholders to allow for secure electronic exchange of data (e.g., MVA data at traffic stop, citation–Court, and adjudication–MVA).

- ~~TRCC10. Review data quality metrics at the TRCC meetings.~~ ^(TRA 1-A)
- TRCC11. Ensure that the TRCC becomes involved in the early stages of any project planning, continues to monitor and oversee project progress, and receives periodic reports. ^(TRA 1-A)
- ~~TRCC12. Continue to meet regularly to review progress of the Traffic Records Strategic Plan and assess the need for any redirection that may be required, and for new projects.~~ ^(TRA 1-A, TRA 1-B)
- ~~TRCC13. Task various data owners to provide short training sessions to TRCC members about the capabilities and uses of their systems and data, as well as the availability of such data to assure that no opportunity to use data is lost to ignorance of its existence.~~ ^(TRA 1-A)
- ~~TRCC14. Host an annual conference for training in traffic records and promoting their improvement.~~ ^(TRA 1-A)
- ~~TRCC15. Use an independent facilitator to conduct workshops with the TRCC members to ensure their participation and input to issues to be addressed and the priority order of the issues selected for action.~~ ^(TRA 1-B)
- TRCC16. Use a cooperative priority setting method for the selection of the traffic records projects to be included in data the Strategic Plan and the Section 408 grant application. ^(TRA 1-B)
- TRCC17. Conduct and publish a complete Traffic Records System inventory to include data definitions and flow diagrams for each component system. ^(TRA 1-C)
- TRCC18. Develop recommendations to promote the broadest possible access to merged data for all legitimate users of the information. This should include, wherever possible, sanitized versions of the files (redacted of personal identifiers and location data if necessary) that are made available to the public. ^(TRA 1-C)
- TRCC19. Review and revise the SHA's data release policy with an eye toward relaxing the restrictions on release of location-specific data. An analysis of the current policy's true level of protection from tort liability is warranted as part of this review and revision. If, as suspected, the policy affords no added protection beyond that provided for in current law and court precedent, the restriction on release of location-specific data should be lifted entirely. If needed, a signature form protecting the State from liability could be added to the data release process. ^(TRA 1-C)
- TRCC20. Develop web-based training to educate users in proper use and interpretation of highway safety data sources available online. Encourage the users of the recommended online query tools to complete the web-based training before accessing the tools. ^(TRA 1-D)
- TRCC21. Continue to promote the use of data within the traffic safety community and the public as a whole. Task various data owners to provide short training sessions to TRCC members about the capabilities and uses of their systems and data, as well as the availability of such data to assure that no opportunity to use data is lost to ignorance of its existence. ^(TRA 1-D)

- TRCC22. Ensure TRCC participation in the development of the Court’s updated case management system. ^(TRA 1-E)
- TRCC23. Review recommendations from FHWA State Roadway Safety Data Capability Assessment and evaluate the viability and measurability of the following:
- Create a Data Governance Group composed of agency executives and senior management.
 - Ensure cross-functional user input into data improvement decision-making.
 - Establish liaison between the Data Governance Group and data improvement project managers.
 - Implement “zero defects” data quality management policies.
 - Establish liaison relationships between the Data Governance Group and the state TRCC.
 - Establish feedback mechanisms among users, collectors, and data managers.
 - Create or use existing cross-functional teams (e.g., the state Traffic Records Coordinating Committee, executive panels, etc.) to develop data quality standards and data improvement project review and coordination.
 - Ensure that data custodians and IT support staff are filling necessary roles with respect to managing data quality and system improvement projects.
 - Periodically assess users’ needs to ensure that emerging concerns are addressed and that the system evolves along with the changes in users’ needs and expectations.
 - Develop a Data Business Plan for managing core data programs in each agency.
 - Develop defined roles for data stewards (custodians of data resource), business owners of the data, communities of interest, stakeholders, and others.
 - Benchmark data quality against industry standards.
 - Develop a statewide data quality dashboard. (StateStat?)
 - Develop a data catalog and publish a Data Governance manual/handbook.
 - Develop and maintain data definitions and business rules.
 - Standardize all data quality and data integration tools statewide.
 - Adopt Service Oriented Architecture and Open Database Connectivity as standards. ^(RSDCA 3A, 3B, 3C)
- TRCC24. Based on a review of the recommendations in TRCC23, advise the TRCC Executive on viability, and determine if any recommendations need to be made to the Governor’s Office or the State Legislature.

Crash Objectives

- CRA01. Increase from 3% to 84% the submission of Commercial Motor Vehicle (CMV) crash reports within 90 days from time of incident for timely submission to SAFETYNET.
PM01: % CMV crash reports submitted to SAFETYNET within 90 days
- CRA02. Increase completeness of Vehicle Identification fields to achieve completeness greater than 70%, which will categorize Maryland as a fair reporting state according to SAFETYNET standards.
PM01: Records with complete Driver Information fields will be divided by the total number of records to derive the percent complete. Specifically, three months in one period will be

compared three months of a later period, and an average percentage for completeness will be derived.

- CRA03. Increase completeness of Driver Information fields to achieve completeness greater than 70%, which will categorize Maryland as a fair reporting state according to SAFETYNET standards.
PM01: Records with complete Driver Information fields will be divided by the total number of records to derive the percent complete. Specifically, three months in one period will be compared three months of a later period, and an average percentage for completeness will be derived.
- CRA04. Develop a training module and updated manual to increase the completeness and accuracy of collected crash data (for use by MSP academy, MPCTC, local law enforcement agencies).
- CRA05. Decrease the number of unknown BAC levels for eligible drivers in the FARS database (from 35% in 2008 to 25% in 2015).
PM01: % unknown BAC levels for eligible drivers
- CRA06. Increase the number of tested surviving drivers from 22% in 2008 to 35% in 2015.
PM01: #/% of tested surviving drivers
- CRA07. Increase % of BAC reports submitted to FARS within 60 days from 30% to 60%.
PM01: % BAC reports submitted to FARS within 45 days
- CRA08. Increase % of BAC reports submitted to MAARS within 60 days from xx% to xx%. ^(CDIP)
PM01: % BAC reports submitted to MAARS within 60 days
- ~~CRA09. Discontinue the microfilming process being used for capture of paper reports when it is feasible.
PM01: Date microfilming process ceased Microfilming ceased at MSP-CRD November, 2010.~~
- ~~CRA10. Identify those agencies capable of sending crash report data in the established XML protocol.~~
- ~~CRA11. Develop a transmission specification protocol for crash reports with emphasis on the use of XML technologies. XML protocol may include metadata, which contains owner, security, access, and other use constraints. Federal standards should be reviewed in the development of the statewide standard.~~
- ~~CRA12. Implement a transmission specification protocol for crash reports with an emphasis on use of XML protocols in order to accept electronic files from 100% of those agencies capable of sending crash reports in the established protocol.~~
- ~~CRA13. Use electronic devices to capture X-Y coordinate location data on crash reports.~~
- ~~CRA14. Increase the percentage of accurate location data in the crash file as compared to the state highway master file. ^(CDIP)
PM01: Number of records with accurate location data in crash file divided by the total number of crash records~~

~~PM02: Percent of records in the state crash file with latitude and longitudinal coordinates.~~

- CRA15. Increase the number of Model Minimum Uniform Crash Criteria (MMUCC) data elements and attributes in the crash reporting system. ^(CDIP)
PM01: Number of MMUCC elements found full in the State crash database.
PM02: Number of MMUCC elements found partial in the State crash database.
PM03: Number of MMUCC attributes found full in the State crash database.
PM04: Number of MMUCC attributes found partial in the State crash database.
PM05: Percent of pedestrian crash records in the state crash file with date of birth completed.
PM06: Percent of serious injury records in the state crash file with a complete EMS run sheet number.
- CRA16. Define methodologies for capturing valid VINs in the crash file to establish a baseline.
PM01: Methodologies documented
- CRA17. Develop and document a mechanism to provide notification to law enforcement agencies/academies of completeness, accuracy and timeliness issues related to crash data.
PM01: Mechanism identified
PM02: Documentation completed
- CRA18. Investigate other data sources outside the statewide standard threshold for reporting of crashes (e.g., incident reports and SERO reports) to determine potential usefulness in highway safety analysis.
PM01: # data sources identified
PM02: List of data sources filed with TRCC
- ~~CRA19. Decrease the average number of days from the date of a crash to the entry of the crash report into the State crash file.
PM01: Percent of records in the state database within 30 days of the incident.~~
- CRA20. Increase the number of United States Park Police fatal collision reports, which occur on USPP property, submitted to the Maryland State Police, and increase the number of reports submitted by Ft. Meade military personnel (ideally by way of these federal installations completing the State uniform report).
PM01: % of reports submitted to MSP FARS within 90 days of incident
- CRA21. Increase accessibility of traffic record data online. ^{(TRA 1-D) (CDIP)}
- CRA22. Undertake a comprehensive review of the crash reporting custodial responsibilities of the MSP, and establish clear assignment of, targets for, and tracking of the agency's accomplishment of those responsibilities. ^(TRA 2-A)
- ~~CRA23. Establish a plan and timetable for achieving 50 percent electronic data collection of crash data. Establish milestones for achieving interim levels of deployment in line with the electronic crash field data collection system development plan established by data transfer to eMAARS the MSP. ^(TRA 2-A)~~

- ~~CRA24. Establish a timeline and deliverable schedule for all remaining necessary modifications to eMAARS to meet the established criteria. (TRA 2-A)~~
- ~~CRA25. Set a timetable for the abandonment of MAARS. (TRA 2-A)~~
- ~~CRA26. Eliminate the backlog of crash report data entry through use of temporary and supplemental workers. (TRA1-C, TRA 2-A)~~
- ~~CRA27. Increase the timeliness in receiving crash reports from LEAs to CRD. (TRA 2-A) (CDIP)~~
- ~~CRA28. Review statewide LEA's policy and procedures regarding the release of crash reports containing juvenile information. Seek a statewide legal opinion defining the access allowed under the law. (TRA 1-C, TRA 2-A)~~
- CRA29. Set appropriate goals for the creation and release of crash data. (TRA 2-A)
- CRA30. Transition the staff that process crash data at the MSP CRD to be data quality control auditors as data entry activities decrease due to increased electronic submission of crash reports. (TRA 2-A)
- CRA31. Provide a more streamlined method for the use of roadway and crash datasets for the identification of potential hazardous locations. (TRA 2-B)
- CRA32. Provide MSCAN and direct access to merged datasets to authorized safety program analysts and managers, in particular SHA district traffic engineers, local engineers and enforcement officers, and MHSO staff. (TRA 2-B) (CDIP)
- CRA33. Establish a formal crash data quality control program. (TRA 2-A) (CDIP)
- ~~CRA34. Develop periodic (quarterly) data quality performance reports that can be used by MSP and SHA database administrators, Maryland TRCC members, LEAs, and other safety stake holders to further improve the quality of the Maryland crash data. (CDIP)~~
- ~~CRA35. Develop a procedure to calculate the statewide average (median) number of days from the time of crash occurrence until the data are available for analysis (MSCAN). (CDIP)~~
- CRA36. Disaggregate the current ad hoc error report into accuracy and completeness errors. (CDIP)
- CRA37. Develop and calculate performance measures on accessibility using the following criteria. (CDIP)
- PM01: Number of users or data requests
 - PM02: Types of requestor
 - PM03: Number of data request fulfillments
 - PM04: Types of request (aggregate level or detailed level data)
 - PM05: Number of times web site hits (after developing a web-based query system)
 - PM06: Number of pages (screens) viewed by visitors
 - PM07: Average time spent (total minutes/Total Number of visits).
- CRA38. Standardize the classification of motor vehicle crash fatalities.

- CRA39. Develop a DUI tracking system following the recommendations from the National Highway Traffic Safety Administration (NHTSA) on a model Impaired Driving Records System (IDRIS).
(SHSP)
- CRA40. Increase the percentage of EMS data in the FARS database.
PM01: # of reports with complete EMS First Notified data.
PM02: # of reports with complete EMS First Scene Arrival data.
PM03: # of reports with complete EMS Hospital data.
- ~~CRA41. Increase the completeness of locatable crashes in the State database by linking to geo-coded crash data reported by Baltimore City.
PM01: # of crashes in Baltimore City with x/y information linked to State database crash report numbers from Baltimore City.~~
- ~~CRA42. Delay the destruction of the 2005 microfilm tapes, scheduled in 2011, until the issue of SHA's accessibility to reports is resolved.~~

Driver Objectives

- DRI01. ~~Develop and implement communications system to convey driver and vehicle data to police vehicles for the support of law enforcement functions.~~ Data are available to law enforcement agencies through Public Safety. Change objective to accessibility measurement for law enforcement?
- DRI02. Determine if critical and essential administrative actions are being added to driving records and determine what actions would be required to have additional information added to the driving record.
- DRI03. Evaluate the need to include BAC information on the driving record and what actions would be required to have this information on the driving record in a reasonable time frame.

Vehicle Objectives

- VEH01. Document progress in meeting the requirements necessary for participation in NMVTIS.
PM01: Establish compliance standards for retailers and vendors
PM02: #/% of retailers and vendors in compliance
PM03: Timely submission to NMVTIS

Injury Surveillance System Objectives

- ~~ISS01. Develop a transmission specification protocol for EMS data with emphasis on the use of XML technologies. XML protocol may include metadata, which contains owner, security, access, and~~

~~other use constraints. Federal standards should be reviewed in the development of the statewide standard.~~

~~ISS02. Implement a transmission specification protocol for EMS data with an emphasis on use of XML protocols.~~

~~ISS03. Use electronic devices to capture X-Y coordinate location data on EMS reports.
PM01: % of completeness of longitude and latitude~~

ISS04. Increase % of EMS patient care reports submitted to MIEMSS within 24 hours to 90%.

ISS05. Seek at least 1 new funding opportunity to maintain the electronic EMS and trauma data system.

~~ISS06. Develop and document a plan to migrate EMS information to an electronic data collection and analysis system.~~

ISS07. Increase the percentage from 84% to 100% of National Emergency Medical Services Information System (NEMSIS) compliant data elements in the EMS reporting system.
PM01: # of NEMSIS-compliant data elements in the State EMS database divided by total number of NEMSIS elements

~~ISS08. Continue efforts towards the development of the next generation of eMAIS. ^(TRA 2-F)~~

ISS09. Improve the collection of identifiers within the trauma registry and MAIS to support the coding of EMS information in the trauma registry. ^(TRA 2-F)
PM01: Increase the % completion rate for 911 call times.
PM02: Increase % completion rate for dispatch EMS unit scene arrival times.

~~ISS10. Undertake an effort to integrate eMEDS data with CAD systems to improve the completeness of the eMEDS time information. ^(TRA 2-F)~~

ISS11. Produce a webpage within HSCRC which allows users to query the data directly and alleviates the need to go through the rigorous IRB process for simple aggregate data tables. ^(TRA 2-F)

Citation/Adjudication Objectives

~~CIAD01. Develop and publish a transmission specification protocol for citation data with emphasis on the use of XML technologies. XML protocol may include metadata, which contains owner, security, access, and other use constraints. Federal standards should be reviewed in the development of the statewide standard.~~

CIAD02. Implement a transmission specification protocol for citation data with an emphasis on use of XML protocols to integrate citation with State Highway Administration's MSCAN database.
PM01: % capable agencies using XML protocol

- CIAD03. Increase the percentage from 7% to 17% of completeness of citation data (with x/y coordinates in citation file).
 PM01: % of Total e-citations
 PM02: % of e-citations with GPS
 PM03: % of Total Citations submitted to District Court
 PM04: % of electronic citations in file divided by total # of all citations submitted to Court
- CIAD04. Increase the number of agencies certified in the implementation of e-citation using established certification protocols.
 PM01: % agencies certified in using e-citation
 PM02: #/% police officers able to use e-citation
- CIAD05. Use electronic devices to capture X-Y coordinate location data on citations.
 PM01: List of agencies able to use electronic devices to capture X-Y data
 PM02: % of such agencies using electronic devices to capture X-Y data
- CIAD06. Create a task force to study the most effective process to ensure paper citations are submitted by law enforcement to the District Court within 30 working days of issuance of citation.
- CIAD07. Establish a comprehensive citation tracking system as recommended in the 2005 Assessment. Evaluate the viability of using either of the two systems at the District Courts, TPC, or the MVA's, CAS. ^(TRA 2-E)
- CIAD08. Continue to expand the deployment of electronic citation capabilities establishing E-TIX as the standard for the State. ^(TRA 2-E)
- CIAD09. Include BAC results in any release of a revised citation. ^(TRA 2-E)

Roadway Objectives

- RDWY01. Evaluate AADT issues in non-state maintained highways to determine coverage gaps.
 PM01: Fulfill FHWA Highway Performance Monitoring System (HPM0S) reporting requirements for AADT's on non-state maintained highways which are on the National Highway System or are functionally classified as Interstate, Urban Freeways and Expressways, or Other Principal Arterial which includes approximately 300 miles of road.
 PM02: Report AADT on a statistically chosen sample of all publicly maintained road mileage (including State, County and Municipal), which includes an additional 300+ miles of County and Municipal roads.
 PM03: Starting 2011, report AADT on all roads which are not functionally classified as Minor Collector or Local for a total of 3,200 miles out of 25,826 total miles of County and Municipally maintained roads.
- RDWY02. Integrate available AADT information from maintained non-state sources and develop a process to incorporate data obtained from Local government agencies into the Traffic Monitoring system.

PM01: Process developed

PM02: Number of datasets obtained from local agencies integrated with I-TMS

- RDWY03. Increase the availability of traffic volume information to evaluate sites based on crash rates.
PM01: Maintain I-TMS website for accessibility to AADT and AAWDT
PM02: Number of requests for Traffic Monitoring data
- RDWY04. Analyze Model Inventory of Roadway Elements (MIRE) and determine how to implement the critical data elements in the Maryland roadway database.
- RDWY05. Reduce the frequency of missing or blank data fields on state-maintained roadways in the inventory to less than 5%.^(RSDCA 1A)
- RDWY06. Pursue high level of detail on all segments as well as either intersections or curves on state-maintained roadways.^(RSDCA 1A)
- RDWY07. Develop a plan to move toward the optimal level of certainty and analytic validity in alignment with the state-of-the-art methods as presented in the Highway Safety Manual to achieve a high level of network screening.^(RSDCA 2A)
- RDWY08. Ensure that the state validates and calibrates modern methods of network screening for local (state) use.^(RSDCA 2A)
- RDWY09. Ensure currency with evolving methods by staying up-to-date with new releases of analytic tools, processes, and methodologies.^(RSDCA 2A)
- RDWY10. Enhance the roadway inventory to include a full data element list of all safety-related infrastructure attributes.^(RSDCA 2A)
- RDWY11. Ensure that all SHA divisions performing crash data analysis and law enforcement collecting location information are using the same roadway inventory file. (Example: LEAs using CDs/books produced and distributed every two years, if they are even receiving the updates, whereas SHA's TSDS is using annual HISD file. *per* Gary Klein)
- RDWY12. Include all public roads in the inventory at the same high level of detailed safety-related infrastructure attributes.^(RSDCA 2C)

Crash Outcome Data Evaluation System Objectives

- CODE01. Provide online access to standardized CODES reports and published research projects.
PM01: # CODES reports available online
PM02: Track real world application and use of data in field
- CODE02. Provide timely access to data analyses and interpretation upon request.
- CODE03. Provide analytical support, using CODES data, to all Highway Safety Office priority program areas and other traffic safety partners throughout the State.
- CODE04. Develop research-level (redacted) datasets that users can download. Include merged data from the CODES project where possible within the constraints of the data security agreements governing the National Study Center's access to specific datasets. ^(TRA 1-D)
- CODE05. Continue to promote and expand the use of CODES data in the traffic safety and injury prevention community. ^(TRA 2-F)
- CODE06. Create and maintain CCODES Data Warehouse

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