TRC

Washington Traffic Records Committee Strategic Plan

2017 Update

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The Plan: At a Glance

MISSION
The Washington Traffic Records Committee supports the reduction of fatalities and serious injuries on Washington State roadways to achieve the state's goal of Target Zero by providing timely, accurate, integrated, and accessible traffic records data.

VISION
Washington will have integrated electronic traffic records access systems that enable the discovery of life-saving strategies by providing users with quality traffic records data when, where, and in the form they need it.

Goal One: Identify and secure sustainable investments for Traffic Records systems.

Strategies:
- Create a sustainable path for Statewide Electronic Collision and Ticket Online Records (SECTOR)
- Promote legislative agendas to support traffic records systems
- Strive to align individual agency priorities with TRC and Target Zero goals
- Develop a "business case" for strategic investments needed to achieve traffic records goals
- Continue to invest towards the goal in achieving 100% electronic records

Goal Two: Create an environment to support quality data collection, sharing and integration.

Strategies:
- Promote innovative data collection solutions
- Establish governance for traffic records data sharing and integration
- Pursue statutory changes to allow greater collection and access to traffic records systems
- Develop data quality processes between partner agencies to improve information quality
- Support data integration for traffic records data sets,
- Improve timeliness and quality of traffic safety data
- Standardize fields to support data linkages
- Improve the data quality control programs for traffic records systems

Goal Three: Provide quality data, analysis, and tools to customers and stakeholders.

Strategies:
- Modernize traffic data systems
- Improve map-based crash intelligence for local law enforcement
- Develop a statewide DUI database
- Develop predictive analytics tool for law enforcement

Goal Four: Promote collaborative partnerships and innovation among TRC agencies.

Strategies:
- Develop a shared vision and spirit of collaboration that is embraced by all stakeholders
- Develop a communication strategy to educate TRC members, and their internal and external stakeholders about the traffic records vision and goals of the TRC
- Support on-going training and communication tools to enable innovation and collaboration
- Identify key performance measures and report them in a data dashboard that is accessible to all TRC members

OUTCOMES	
- Sustainable traffic records systems - Quality data collection for improved analysis - 100% electronic traffic records data - Accurate, timely, location-based data	- Instant, automated data capture - Advanced data analysis and research skills - High level of customer satisfaction with data

The Importance of Traffic Safety Records

Traffic records data serves as the primary source of knowledge about Washington's transportation environment. The State's traffic records system consists of numerous systems gathering, processing, and sharing information about crashes, location and make-up of the state's roadways, registered vehicles and licensed drivers, citation, adjudication and health data. Together these systems provide the underpinnings of a comprehensive campaign to reduce serious injuries and fatalities on Washington's roadways.

In 2000, Washington was the first state in the nation to set an aggressive goal for traffic safety: zero traffic deaths and serious injuries. This vision is called Target Zero.

Target Zero is Washington's data-driven strategic highway safety plan. Its purpose is to shine light on where limited resources of time, talent, and funding will have the most impact saving lives and reducing serious injury. In order to achieve this purpose, Washington's traffic records systems must be able to provide timely, accurate, integrated and accessible data. This data is foundational to focusing resources and monitoring progress toward the Target Zero goal.

The work of the TRC and its strategic goals and initiatives align with Target Zero in two fundamental ways:

- Quality data is essential to identifying and evaluating the contributing factors to crashes and assessing the effectiveness of countermeasures implemented to mitigate those factors.

- Traffic safety data helps identify innovative and targeted strategies in areas that will have the greatest impact on achieving Target Zero.

In 2013, Governor Inslee and the Washington Traffic Safety Commission (WTSC) further highlighted the critical importance of traffic safety data and its associated systems by assigning them a Level One Priority in Target Zero. The 2017 TRC Strategic Plan provides the framework for continuing this emphasis by focusing the TRC goals and strategies on:

- The needs of the customer or end user,

- Removing barriers to data quality and integration,

- The strong drive to use predictive analysis in public safety decision-making

- Leveraging advances in technological tools and capabilities that will allow for easier and better data access, integration and use.

Washington's traffic information and support data systems are comprised of hardware, software, and accompanying processes that capture, store, transmit, and analyze a variety of data. The following information is used to make up Washington's Traffic Records System:

- Traffic fatalities and serious injuries
- All statewide traffic crashes
- Driver citations
- Criminal history and judicial outcome data
- Driver licenses and registered vehicles
- Commercial motor vehicles
- Emergency Medical Systems
- Vital statistics
- Trauma and inpatient hospital records
- Emergency department and clinic records
- Roadway geometrics and features
- Traffic volumes, traffic mix and freight
- Location information via Geographic Information Systems
- Population estimates

Each component of this system provides key information for diagnosing the contributing factors to crashes and for the supporting decisions related to achieving Target Zero.

Current State

Accomplishments

There has been significant progress on TRC goals and strategies every year. Some of the systems most recently improved include:

- **Citation and Collision Records:** The Electronic Traffic Information Processing (eTRIP) Initiative has matured at a rapid pace since its launch in 2007. It reduces the inefficiencies and redundancies of paper-intensive systems by creating a seamless and integrated process, initiated by SECTOR (Statewide Electronic Collision and Ticketing Online Records) and routed through JINDEX (Justice Information Network Data Exchange). Collision reports, tickets and other traffic related documents created by law enforcement are created and disseminated to agencies that require the data to perform their business functions. As of January 2017, 94% of crash reports created by law enforcement in Washington are submitted electronically. However, with this success, the maintenance and further development of SECTOR has reached critical mass that can jeopardize the project if a sustainable funding model is not established.

- **EMS/Injury Surveillance Systems:** The TRC is funding programs to enhance the functionality and completeness of the Rapid Health Information NetwOrk (RHINO) and the Washington Emergency Medical Services Information System (WEMSIS).

    - The RHINO program is Washington State's syndromic surveillance program which receives visit-level data for each patient visiting emergency departments (EDs), hospitals, and clinics throughout the state in near-real time. This system continues to develop rapidly, and at present it contains data from over 26% of the EDs in Washington State. It has substantially expanded its efforts to enable public health and injury prevention partners to use these data effectively to protect the health and wellness of the public. This includes the establishment of the RHINO Community of Practice, where 73 individuals representing 15 jurisdictions and organizations work collaboratively to understand the utility of these data.

    - Department of Health is in the process of experimenting with approaches to linking the Emergency Medical Services data (WEMSIS) with the Trauma Registry, with the goal of allowing for more flexibility while matching a higher proportion of records from multiple responding agencies to the same event, and eventually linking WEMSIS with other data sources.

- **Crash and Roadway Engineering Data:** Multiple projects are currently underway that will provide additional advances in data analysis:

    - In January 2017, WSDOT started to collect unique intersection identifiers in its crash records that allow users to associate a crash to a specific intersection. This will assist in identifying, evaluating and planning safety enhancements to problematic intersections. This initial phase is limited to roadways that intersect with a state route or interstate. WSDOT continues to work towards its ultimate goal of collecting unique intersection identifiers for all public roadways jurisdictions.

- o The TRC is continuing to fund the "Roadway Inventory Systems Modernization Project". The project will allow WSDOT to further their capabilities to steward, integrate and share roadway data through a spatial Linear Referencing System (LRS). This work includes providing additional spatial roadway elements, expanding the capabilities for data integration between systems, increasing the geographic scope beyond the state roadway system, and developing a sustainable technical and business process for the stewardship of a statewide all public road LRS..

- **WSDOT's Crash Data Portal** provides the general public canned summary reports at a state, county or city jurisdictional level including tabular data, maps and charts. The portal also provides reports pertaining to the emphasis areas outlined in Target Zero. WSDOT is working on implementing a secured phase of the portal providing more detailed queries. The secured site will allow authorized users to download detailed crash data files for in-depth analysis.

Gaps and Barriers

While much has been accomplished, there are gaps and barriers that must be overcome if progress is to continue.

- **Progress on data sharing and integration continues to be slower than everyone would like** and some major barriers exist.

  - o Access to different data sets residing in TRC member agencies is significant. For example, crash data has federal protections under 23 U.S. Code § 148 and 409. These protections are contingent on where the crash data is stored, who has access and how the data is released. Getting the right expertise in the room to understand and address the issues of security, confidentiality, legal concerns, and technical capabilities/deficits is a key reason why progress is slow.

  - o There has been significant progress in Citation data quality, in the monitoring of system failures and putting checks in place to identify and remediate tickets when there is potential for problems to occur. Communication and understanding around that has improved significantly between agencies, but the agencies need to continue to refine the response process.

- **There are concerns about data quality** across many different data systems, as documented in the NHTSA Assessment (see Appendix A for detailed findings).

- **The TRC has not been able to leverage resources to the highest degree** possible because the approach to seeking funding and investments beyond NHTSA grant funding to support Committee's efforts is not coordinated.

Vision, Mission, Goals and Strategies

Mission

The Washington Traffic Records Committee supports the reduction of fatalities and serious injuries on Washington State roadways to achieve the state's goal of Target Zero by providing timely, accurate, integrated, and accessible traffic records data.

Vision

Washington will have integrated electronic traffic records access systems that enables the discovery of life-saving strategies by providing users with quality traffic records data when, where, and in the form they need it.

Pursuing this vision will allow the state to achieve the following outcomes that align directly with Target Zero:

- Sustainable traffic records systems

- Quality data collection for improved analysis

- 100% electronic traffic records data

- Accurate, timely, location-based data

- Centralized data aggregation for analysis

- Instant, automated data capture

- Advanced data analysis and research skills

- High level of customer satisfaction with data

Strategic Goals

Goal One: Identify and secure sustainable investments for Traffic Records systems.

The TRC is not able to leverage resources to the highest degree possible because the approach to seeking funding and investments to support the Committee's efforts is not coordinated. The main driver is the stresses agencies face within their own internal environments and the challenge of keeping attention focused on traffic records goals and projects in the midst of competing policy, reduction in human capitol, and budgetary priorities. Resource constraints and the priority some TRC partners have had to place on replacement of legacy systems is a barrier to aligning the TRC's resources to address significant issues of data collection, sharing, and integration.

Strategies:
- Create a sustainable path for Statewide Electronic Collision and Ticket Online Records (SECTOR)

- Promote legislative agendas to support traffic records systems
- Strive to align individual agency priorities with TRC and Target Zero goals
- Develop a "business case" for strategic investments needed to achieve traffic records goals
- Continue to invest towards the goal in achieving 100% electronic records

Outcomes:
- Sustainable traffic records systems
- 100% electronic traffic records data
- Accurate, timely, location-based data
- High level of customer satisfaction with data
- Instant, automated data capture

Goal Two: Create an environment to support quality data collection, sharing and integration.

With improved systems and tools, technical barriers are becoming fewer and the biggest data sharing hurdles are HIPAA laws and public disclosure concerns. The Department of Licensing (DOL) is currently modernizing its IT systems, which is affecting its ability to fully participate in this area in the short-term, but the changes may contribute to higher data integrity and standardization. The Administrative Office of the Courts (AOC) is resource constrained and the replacement of its legacy systems is its highest priority, making it difficult for the agency to participate in activities that would further data sharing. Data integration projects across agencies and within DOL are hampered by lack of a common personal identifier. Data is collected but not warehoused and retention policies are driven more by compliance and not future utility.

Strategies:
- Promote innovative data collection solutions
- Establish governance for traffic records data sharing and integration
- Pursue statutory changes to allow greater collection and access to traffic records systems
- Develop data quality processes between partner agencies to improve information quality
- Support data integration for traffic records data sets,
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- Standardize fields to support data linkages
- Improve the data quality control programs for traffic records systems

Outcomes:
- Quality data collection for improved analysis
- 100% electronic traffic records data
- Accurate, timely, location-based data
- Advanced data analysis and research skills
- High level of customer satisfaction with data
- Instant, automated data capture

Goal Three: Provide quality data, analysis, and tools to customers and stakeholders.

There are existing concerns about data quality, as documented in the 2014 Traffic Records Assessment conducted by National Highway Traffic Safety Administration (NHTSA). These concerns include a number of different data sets within several agencies that are part of the TRC, including crash, vehicle and driver, roadway, citation and adjudication. Efforts to address some of the identified quality issues are already underway; however, there is a need for continued focus and attention on this issue, as more agencies begin using the data for predictive analysis and decision-making. Systemically, agencies lack dedicated staff resources to support data analysis and integration.

TRC members also feel it is time for an infusion of new energy and ideas into fulfilling the traffic records data mission. Some of the accomplishments within the eTRIP program and agency projects the TRC has funded are first-in-the-nation improvements to the collection, dissemination and analysis of traffic records data. Now, the conversation needs to turn to: "what's next?" The TRC looks to a few key states generally, and in specific areas for best practices that could infuse their efforts with fresh ideas and alternative approaches to providing higher quality data, better analysis, and useful tools to customers.

Strategies:
- Modernize traffic data systems
- Improve map based crash intelligence for local law enforcement
- Develop a statewide DUI database
- Develop predictive analytics tool for law enforcement

Outcomes:
- Quality data collection for improved analysis
- 100% electronic traffic records data
- Accurate, timely, location-based data
- Advanced data analysis and research skills
- High level of customer satisfaction with data

Goal Four: Promote collaborative partnerships and innovation among TRC agencies.

The relationships and level of collaboration among the partner agencies within the TRC are strong. Strong relationships of trust and collaboration have been built among the TRC partner agencies over time. This has helped the TRC and its members sustain their inter-dependencies even under the strain of disagreements, particularly in the area of data sharing. Even so, there is not a common understanding of "where we are going and how."

Strategies:
- Continue to foster a shared vision and spirit of collaboration embraced by all stakeholders

- Provide on-going communication with TRC members, and their internal and external stakeholders, about the traffic records vision and goals of the TRC
- Support on-going training and communication tools to enable innovation and collaboration
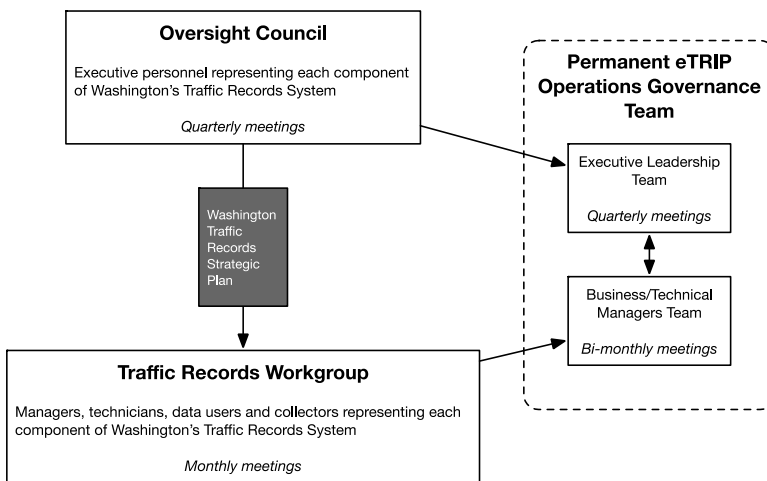- Identify key performance measures and report them in a data dashboard that is accessible to all TRC members

Outcomes:
- Quality data collection for improved analysis
- Advanced data analysis and research skills
- High level of customer satisfaction with data

Implementing the Strategic Plan: TRC Governance Structure

Washington State's Traffic Records Committee has been in existence for over three decades. The activity of this group has varied significantly throughout the years, usually mirroring various changes in priorities at the national and state levels. TRC has formal endorsement through a Memorandum of Understanding involving nine separate agencies. This document provides a charter that clearly lays out the membership structure, duties, and responsibilities and all other authorities and procedures of the TRC.

The organizing agencies believe the best way to achieve the TRC's vision and strategy goals is through a bi-level organization that includes executive-level sponsors, as well as technical and managerial participants. The diagram on the right illustrates the governance structure that is in place to carry out the strategic goals and priorities of the TRC.

Oversight Council

Executive personnel representing each component of Washington's Traffic Records System

Quarterly meetings

Washington Traffic Records Strategic Plan

Permanent eTRIP Operations Governance Team

Executive Leadership Team

Quarterly meetings

Business/Technical Managers Team

Bi-monthly meetings

Traffic Records Workgroup

Managers, technicians, data users and collectors representing each component of Washington's Traffic Records System

Monthly meetings

The Oversight Council – The council provides oversight in creating and approving strategies and projects to improve Washington's traffic records system. The Oversight Council ensures strategic, project alignment with individual agency priorities, standards, and practices and performs an annual evaluation of Washington's traffic records strategy plan.

The Traffic Records Workgroup – The Workgroup functions as a technical and managerial forum for the discussion and examination of statewide traffic records issues. The Traffic Records Workgroup is responsible for creating, coordinating, and implementing improvement projects.

Together, the two groups develop the state's Traffic Records Committee strategic plan.

Aligning the TRC Strategic Plan to National, State and Local Goals

The TRC is a partnership of federal, state, and local stakeholders from transportation, law enforcement, criminal justice, and health disciplines. The TRC's membership includes state and local agencies and organizations that have a shared mission to reduce the number of fatalities and injuries and severity of injuries related to trauma. All of these organizations participate in the development of the TRC strategic plan, and thereby align the mutual strategic goals of each respective agency with statewide goals for traffic records.

Target Zero: Washington State Strategic Highway Safety Plan

Target Zero is a data-driven approach to reducing traffic fatalities and serious injuries. Timely, accurate, integrated, and accessible data is the foundation for targeting resources and monitoring progress toward zero traffic fatalities and serious injuries by 2030. The TRC supports Target Zero by providing quality data needed to:

- Diagnose the contributing factors to crashes,

- Assess the effectiveness of implemented countermeasures, and

- Identity innovative and targeted strategies that will have the greatest impact on achieving the goal of zero deaths and zero serious injuries.

The Traffic Data Systems goals and strategies in Target Zero align directly with the TRC strategic plan.

National Agenda for Transportation Safety

The National Highway Transportation Safety Administration (NHTSA) is a critical partner in Washington's effort to reduce traffic fatalities and serious injuries. NHTSA provides funding and oversight for the Traffic Records committee through the Washington Traffic Safety Commission.

NHTSA provides coordinated guidance, outreach, best-practices, and training and technical assistance designed to improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of state crash, driver, vehicle, roadway, citation and adjudication, and injury surveillance databases. The Traffic Records team helps states improve their traffic safety data collection, management, and analysis capabilities through evaluation, training, and technical assistance.

Updating and Reporting Progress on the TRC Strategic Plan

The TRC Strategic Plan is a living document that is designed to guide the state's efforts in traffic records, including the development of project proposals, coordination among TRC partners, and evaluation of the effectiveness of the chosen strategies and projects. Each year, the TRC will conduct an evaluation of Washington's Traffic Records Strategic Plan. This evaluation will consider changing federal, state, and local priorities, as well as emerging technology and how these drive updates to the plan.

Traffic Records Grant Process

Traffic Records is one of the priority areas that WTSC awards funding to, in accordance with NHTSA regulations for funding Traffic Records.

Per 23 CFR1300.22, Grant funds awarded shall be used to make quantifiable, measureable progress improvements in the accuracy, completeness, timeliness, uniformity, accessibility or integration of data in a core highway safety database.

The core highway safety databases are: crash, driver, vehicle, citation and adjudication, roadway and injury surveillance.

Project proposals are submitted through the WTSC annual grant process in January of each year. Grants awarded are for the federal fiscal year, running October 1 – September 30. Even grants to fund continuing projects must be submitted through this process. Both the WTSC Commissioners and the TRC approve Traffic Records projects. The TRC Workgroup reviews and recommends projects to the Oversight Council, who makes the final approval.

As a guideline, the timeline for Traffic Records Committee projects:

Milestone	Month
Grant Proposals due	January
TR proposals distributed to TRC Workgroup for evaluation	February
TRC Workgroup meets to recommend package of TR grants to TRC Oversight Council	February
Technical Advisory Committee recommends grants to Commissioners	March
WTSC Commissioners approves the block Traffic Records grant (as part of the overall grant approval process)	April
TRC Oversight Council meets to approve individual TR projects	May
Project agreements signed	Aug/Sept
Grant funding available	October 1

Appendix A: Aligning the TRC Strategic Plan with the 2014 NHTSA Traffic Records Assessment

NHTSA conducts peer evaluations of state traffic records system capabilities. Independent subject matter experts from state, local, and other areas examine state responses to a uniform set of questions and rates the responses against the ideal set out in the Traffic Records Program Assessment Advisory.

From January through April 2014, NHTSA sponsored a state-wide assessment of Washington's traffic records system. At the conclusion of the assessment, the assessment team released a written report, which documented current traffic records processes in the state and provided recommendations for improvements.

2014 NHTSA Traffic Records Assessment Recommendation	TRC Goal/Strategy/Projects and Performance Measures
Recommendation #1: Crash Interfaces - Improve the interfaces with the Crash data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goals:** • Create an environment to support quality data collection, sharing and integration. • Provide quality data, analysis, and tools to customers and stakeholders. **Strategies:** • Support data integration for traffic records data sets • Improve map-based crash intelligence for local law enforcement **2018 Agency Project:** Data Integration: Linking Datasets – WTSC funds a position that will serve as the coordinator and analyst of the crash-health linkage project, as well as software to support the linkage. This position will lead efforts to develop a comprehensive, integrated traffic records system. *Performance Measure:* Crash Integration **2018 TRC Funded Project:** Enforcement Database Enhancements and Data Visualization - The WSP Enforcement Database will allow law enforcement, engineering groups, and the general public the ability to access collision data using a web-based portal. Data visualization software will provide dynamic, customizable, data driven visualization for predictive analytics in the interest of public safety.

2014 NHTSA Traffic Records Assessment Recommendation	TRC Goal/Strategy/Projects and Performance Measures
Recommendation #2: Crash Data Quality Control - Improve the data quality control program for the Crash data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** Provide quality data, analysis, and tools to customers and stakeholders. **Strategies:** ● Modernize traffic data systems ● Improve map-based crash intelligence for local law enforcement **2018 TRC Funded Projects:** X/Y module for SECTOR - Add a mapping component to SECTOR to improve the accuracy and streamline the process of identifying collision location, and to leverage spatial data in order to auto-populate text fields to reduce officer workload. *Performance Measure:* Crash Completeness PTCR Re-design - The PTCR Re-Design Project will bring the crash system into complicance with MMUCC serious injury definitions, and meets NHTSA's recommendation that states review their crash forms at least once every five years.
Recommendation #3: Vehicle Interfaces - Improve the interfaces with the Vehicle data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** Create an environment to support quality data collection, sharing and integration. **Strategies:** ● Promote innovative data collection solutions ● Pursue statutory changes to allow greater collection and access to traffic records systems ● Support data integration for traffic records data sets **TRC Agency Project:** System Modernization - DOL is in the process of a significant system modernization, which will include the ability for vehicle data systems to interface with other program applications. *Performance Measure:* Vehicle Integration

2014 NHTSA Traffic Records Assessment Recommendation	TRC Goal/Strategy/Projects and Performance Measures
Recommendation #4: Vehicle Data Quality Control - Improve the data quality control program for the Vehicle data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** Create an environment to support quality data collection, sharing and integration. **Strategies:** • Promote innovative data collection solutions • Standardize fields to support data linkages **TRC Agency Project:** Data Quality Controls - As part of the DOL Vehicle System modernization, there are many data cleanup processes underway. Data quality controls are being added to the new system to limit and/or standardize how fields such as "Makes" and "Models" are entered into the new system. *Performance Measure:* Vehicle Uniformity
Recommendation #5: Driver Description and Contents - Improve the description and contents of the Driver data system that reflects best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** Provide quality data, analysis, and tools to customers and stakeholders. **Strategy:** • Modernize traffic data systems **TRC Agency Project:** Data Dictionary - DOL has a data dictionary that is maintained and will be used when updating records within the Driver data system when the Drivers Modernization is completed. This should improve data descriptions and content. *Performance Measure:* Driver Uniformity

2014 NHTSA Traffic Records Assessment Recommendation	TRC Goal/Strategy/Projects and Performance Measures
Recommendation #6: Driver Data Quality Control - Improve the data quality control program for the Driver data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** Create an environment to support quality data collection, sharing and integration. **Strategies:** • Develop data quality processes between partner agencies to improve information quality • Improve timeliness and quality of traffic safety data **Agency Projects:** Standardization of Data Elements - With the modernization of the DOL Driver data system, one of the tasks involved will be to identify and standardize all data elements used for updating driver records. This will include a review of all business rules associated with record updates that will improve data quality and establish and/or identify improved data quality controls for the Driver data systems. *Performance Measure:* Driver Uniformity
Recommendation #7: Roadway Data Quality Control - Improve the data quality control program for the Roadway data system that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** Create an environment to support quality data collection, sharing and integration. **Strategies:** • Improve timeliness and quality of traffic safety data • Standardize fields to support data linkages • Improve the data quality control programs for traffic records systems **2018 TRC Funded Project:** Roadway Data System Integration - Act on recommendations outlined in previously funded planning and development project, in order to develop a sustainable technical and business process for the stewardship of a statewide all public roads LRS. This will involve the implementation of existing software, creation of new databases, and development of new business processes. *Performance Measure:* Roadway Integration

2014 NHTSA Traffic Records Assessment Recommendation	TRC Goal/Strategy/Projects and Performance Measures
Recommendation #8: Citation / Adjudication Interfaces - Improve the interfaces with the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goals:** • Create an environment to support quality data collection, sharing and integration. • Provide quality data, analysis, and tools to customers and stakeholders. **Strategies:** • Promote innovative data collection solutions • Develop a DUI database • Improve timeliness and quality of traffic safety data **2018 TRC Funded Project:** Electronic DUI Processing: Develop an integrated system within SECTOR that allows users to complete the current DUI process and associated administrative tasks electronically. Tasks include data collection, form printing, information storing, administrative processing, routing, data retention and the two-way transmission of information. The system will provide a data source capable of report creation, data distribution and extraction resulting in impactful decision making and efficient, accurate, timely prosecution. *Performance Measure:* Citation Integration
Recommendation #9: Citation / Adjudication Data Quality Control - Improve the data quality control program for the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** Create an environment to support quality data collection, sharing and integration. **Strategy:** • Improve timeliness and quality of traffic safety data **2018 TRC Funded Project:** Electronic DUI Processing: Develop an integrated system within SECTOR that allows users to complete the current DUI process and associated administrative tasks electronically. Tasks include data collection, form printing, information storing, administrative processing, routing, data retention and the two-way transmission of information. The system will provide a data source capable of report creation, data distribution and extraction resulting in impactful decision making and efficient, accurate, timely prosecution. *Performance Measure:* Citation Accuracy

2014 NHTSA Traffic Records Assessment Recommendation	TRC Goal/Strategy/Projects and Performance Measures
Recommendation #10: EMS / Injury Surveillance Interfaces - Improve the interfaces with the Injury Surveillance systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goals:** • Remove barriers to data sharing and integration • Provide quality data, analysis and tools to customers **Strategies:** • Develop better injury data • Pursue additional statutory changes to allow greater access to the trauma registry and other health data **2018 TRC Funded Projects:** WA Emergency Dept. Data (RHINO)- Continue to improve the analytical utility of the data in the Washington State Department of Health's (DOH) emergency department data system, and expand its use for traffic related injury surveillance. DOH plans to improve processes and continue partner engagement to assure long term program sustainability, inform use cases for this data, and provide technical assistance to Target Zero partner agencies. *Performance Measure:* Injury Surveillance Completeness Washington State Emergency Medical Services data registry (WEMSIS) – This project builds on the Key EMS Performance Indicators successfully developed with funding from a previous grant. The project FTE will develop and implement procedures for the way DOH prepares the analytical data files for new two databases, plan and manage the implementation of the analytical WEMSIS and Trauma Registry data sets that will be used for the EMS and Trauma system analyses, and support the inter-agency data integration activities to improve traffic safety data. *Performance Measure:* Injury Surveillance Completeness

2014 NHTSA Traffic Records Assessment Recommendation	TRC Goal/Strategy/Project
Recommendation #11: Data Use and Integration Capacity - Improve the traffic records systems capacity to integrate data that reflects best practices identified in the Traffic Records Program Assessment Advisory.	**Strategic Goal:** • Create an environment to support quality data collection, sharing and integration. **Strategies:** • Develop data quality processes between partner agencies to improve information quality • Improve timeliness and quality of traffic safety data • Develop predictive analytics tool for law enforcement **Agency Project:** Data Integration: Linking Datasets – WTSC funds a position that will serve as the coordinator and analyst of the crash-health linkage project, as well as software to support the linkage. This position will lead efforts to develop a comprehensive, integrated traffic records system. *Performance Measure:* Crash and Injury Surveillance Integration **2018 TRC-Funded Projects:** X/Y module for SECTOR - Add a mapping component to SECTOR to improve the accuracy and streamline the process of identifying collision location, and to leverage spatial data in order to auto populate text fields to reduce officer workload. *Performance Measure:* Crash Completeness

Appendix B: TRC Membership and Coordination

The TRC is a partnership of federal, state, and local stakeholders from transportation, law enforcement, criminal justice, and health disciplines. The TRC's membership includes state and local agencies and organizations that have a shared mission to reduce the number of fatalities and injuries and severity of injuries related to trauma. The TRC Coordinator is Debi Besser, Traffic Records Program Manager at the Washington State Traffic Safety Commission.

The TRC Oversight Council consists of:

Organization & Position	Functional Area Represented
Washington Traffic Safety Commission, Director	Highway Safety Office (Chair)
Administrative Office of the Courts, Judicial Services Director	Citation/Adjudication Systems
Washington State Patrol, Asst. Chief, Technical Services Bureau	State Law Enforcement
Department of Transportation, Transportation Data, GIS & Modeling Office Manager	Crash & Roadway Systems
Department of Licensing, Programs and Services Assistant Director	Driver & Vehicle Systems
County Road Administration Board, Intergovernmental Policy Manager	Local Roadway Systems
Department of Health, Director, Office of Community Health Systems	Injury Surveillance Systems
Washington Association of Sheriffs & Police Chiefs, Police Chief	Local Law Enforcement
Office of the Chief Information Officer, Sr. Policy Advisor	State Information Technology

The TRC Workgroup consists of:

Organization and Position	Functional Area Represented
Washington State Patrol, Technical Services Bureau, Information Technology Division, Application Development and Support Section Manager	State Law Enforcement (Co-chair)
Washington State Patrol, Field Operations Bureau, Lieutenant	State Law Enforcement
Washington State Department of Licensing, Citation & Accident Unit Manager	Driver System
Washington State Department of Licensing, Records and Program Management Manager	Vehicle System
Administrative Office of the Courts, Information Services Division, Data Quality Coordinator	Citation/Adjudication Systems
Administrative Office of the Courts, Judicial Services Division, Court Association Coordinator	Citation/Adjudication Systems
Washington Traffic Safety Commission, Programs & Services Division, Program Manager	Highway Safety Office (Co-Chair)
Washington Traffic Safety Commission, Research & Data Division, Research and Data Manager	Highway Safety Office
Washington State Department of Transportation, Crash Data Reporting Branch Manager	Crash System

Updated 6/26/17

Organization and Position	Functional Area Represented
Washington State Department of Transportation, GIS & Roadway Data Office, Transportation Planning Specialist	Roadway System
Washington State Department of Health, Community Health Systems, Research, Analysis and Data Section Manager	Injury Surveillance Systems
Washington State Department of Health, Center for Health Statistics, Epidemiologist	Injury Surveillance Systems
Washington Association of Sheriffs & Police Chiefs, Administrative Services Director	Local Law Enforcement
County Road Administration Board, Road System Inventory Manager	Local Roadway Systems
Office of the Chief Information Officer, Sr. Policy Advisor	State Information Technology
Washington State Patrol, Collision Records	Collision Reporting
National Highway Traffic Safety Administration, Region 10, Washington Regional Program Manager	Federal Advisor
Federal Motor Carrier Safety Administration, Washington Division Administrator	Federal Advisor
Federal Highway Administration, Washington Division, Safety/Geometric Design Engineer	Federal Advisor

Appendix C: Performance Measures

The TRC has developed a set of traffic records performance measures to gauge the timeliness, accuracy completeness, uniformity, integration, and accessibility of traffic safety data.

These measures are updated and reviewed annually by the Oversight Council. In addition to these TRC level measures, individual project managers track performance measures at the project level and for the specific objectives or strategies that they own individually, and these are reported to the TRC during project updates.

For FFY2017, the following performance measures demonstrate significant, system-wide performance:

Injury Surveillance - Completeness	Baseline	Actual
	April 1, 2015 – March 31, 2016	April 1, 2016 – March 31, 2017
Number of Emergency Department visit records reported (estimated percent of total ED records)	5036 (0.22)	289,428 (13.5)
Narrative – There were an estimated 2,324,607 emergency department visits during the baseline period. The total number of Emergency Department visit records submitted to the National Syndromic Surveillance Program ESSENCE system increased by 284,392. This is nearly a 57-fold increase. This increase has been driven through outreach and onboarding efforts with emergency departments, funded by TRC grants in the last few years.		
Calculation Method – A total of emergency department visit records submitted by all emergency departments, by visit date.		

Appendix D: Status and strategies for the collection of MIRE Fundamental Data Elements

23 CFR, Part 924.11 requires States to "incorporate specific quantifiable and measurable anticipated improvements for the collection of MIRE fundamental data elements into their Traffic Records Strategic Plan by July 1, 2017" that will ensure they "have access to a complete collection of the MIRE fundamental data elements on all public roads by September 30, 2026."

The Current Status of MIRE Fundamental Data Element Collection

WSDOT does not maintain a database that is specifically designed to house MIRE FDE data. Many of the MIRE FDE are collected as a byproduct of standard WSDOT business processes. Much of the MIRE FDE data exists, and is being maintained, but it is not being consolidated into a dedicated MIRE FDE data resource. Below is a table with percentage of elements currently being collected. Estimates are based on number of FDEs, and do not estimate level of effort.

Jurisdiction	Estimated Percent complete	Approximate accuracy of estimate
WSDOT (state)	94%	+/- 90%
WSDOT (local)	20%	+/- 60%
CRAB (county)	65%	+/- 80%
Federal	20%	+/- 60%
Tribal	20%	+/- 60%
Non-DOT (state)	50%	+/- 60%

WSDOT's Transportation Data, GIS and Modeling Office (TDGMO) collects and maintains the elements for state routes in a mainframe system (TRIPS). For non-state routes, TDGMO's HPMS section maintains the data in their HPMS database.

WSDOT's Local Programs Office is responsible for outreach and coordination with local agencies. The County Road Administration Board (CRAB) collects county road data. There is no MIRE FDE Database of city roads. One of the fundamental challenges to MIRE data collection on local roads is that there is no defined incentive for local agencies to collect data elements they do not use. Local agencies are not being offered a tool that uses this data, which would allow them to see a direct benefit for the data collection. There is also no way to compel agencies to collect this additional data (the requirement is directed to the state). The only alternative to local agencies collecting

additional data would be to collect it for all roadways at the state level, which would be a significant financial burden.

Data is available to any WSDOT employee who requests access to the Roadway Data Mart. WSDOT also provides data to external customers upon request. We are considering an online/portal to provide access in the future but have no specific plans at this time.

WSDOT's TDGMO is the responsible office for state routes; CRAB is responsible for county roads; Local Programs from local agencies.

Data Collection methodology, for currently collected MIRE FDE

WSDOT collects and stewards data that is relevant to MIRE as part of several unrelated business processes. Roadway geometric and inventory data, on state routes, is collected from, highway construction contract plans, field reviews, aerial imagery and video logs. This data is entered into a legacy tabular mainframe LRS. The data is exported to a SQL based datamart and to a GIS based LRS. WSDOT also stewards a GIS based "All Public Roads" data resource that includes and supports our HPMS program. Updated as changes occur, ongoing throughout the year. HPMS is published annually. Data validation takes place in all systems at time of data entry, during data migration and as part of integration with other systems.

The County Road Administration Board (CRAB) collects and stewards data that is relevant to MIRE through a custom software application that is used/populated by each county in the state. The system employs an LRS that can be used to place/analyze data on a GIS based LRS. Updated as changes occur, ongoing throughout the year. Data are validate by the software at data entry and as a post entry process.

CRAB has been involved with Model Inventory of Roadway Elements (MIRE) fundamental data element (FDE) collection that are mainly stored in CRAB's Mobility© database. Mobility© is a comprehensive road inventory and management system software, which contains four management systems: 1) Infrastructure Asset Management; 2) Pavement Management; 3) Maintenance Management; and 4) Systemic Safety Project Selection Tool. Each of the 39 counties has a Road Log Manager responsible to update the Mobility© database. The counties collect their own data using GIS, VisRate, SignRate, CRView (road level driven imagery), data collectors and visual. Counties are responsible for maintaining and updating the datasets. They must submit an updated Road Log for its complete road system with all the data elements to CRAB by the annual deadline of May 1.
The Road Log contains control fields used for computation of gas tax allocations.
The control fields are; unique identifier (county road number, beginning milepost, ending milepost), jurisdiction, length, function class, surface type, surface width, right and left shoulder type, right and left shoulder width, and average daily traffic volume. All control field updates are subject to review, approval and are validated by the County Road Administration Board.

Based on this data, CRAB issues a Certificate of Good Practices to the State Treasurer, which directs disbursement of the Motor Vehicle Fuel Tax (MVFT). CRAB has the responsibility to distribute the counties' portion of the MVFT the following year.

WSDOT does not conduct statewide analysis of each individual local agency road. This is because the data alone does not tell the full story, such as recent roadway changes/improvements or site impacts not contained within the MIRE dataset that would impact project viability.

Coordination with Other Agencies, for MIRE FDI, not currently collected

Ownership of the roads, where the elements are not being collected, includes Federal Land Management Agencies, Non-WSDOT State Agencies (Parks and Recreation, Dept. of Natural Resources, Fish and Wildlife), Tribal lands and cities. Some of these agencies do collect MIRE FDE, as a byproduct of internal business processes, but not specifically in support of MIRE/safety.

Sharing data among those agencies that collect, store, maintain, and use the MIRE fundamental data elements could be improved by the use of a common LRS/GIS. This would allow each agency to place/publish/analyze data as events.

Prioritization Criteria for Collecting additional MIRE FDE on All Public Roads

Over the next year, to three years; WSDOT will continue to develop MIRE FDE collection on all state routes and to collect MIRE FDE for county roads from CRAB.

Local Programs does not have any plans in place at this time to collect MIRE FDE. Hopefully the survey will help identify what data we could "have access to" to meet the final rule and what data is truly missing. Depending on the scale of that missing data, we would probably start that discussion with the Traffic Records Committee to see what resources might be available (as per Matthew Enders). Currently those who know the roadways and data the best, the individual local agencies, conduct this type of safety analysis. Doing this at the state level for all local agency roadways would imply that WSDOT has a better knowledge of local roadway needs than the local agencies themselves. Rather, WSDOT structures Highway Safety Improvement Program (HSIP) calls for projects to try to achieve Target Zero, without compelling agencies to collect this data for all roads. All local agencies with fatal or serious injury crashes are eligible for these HSIP safety funds and individual projects are then prioritized for funding at the statewide level. Thus, the additional MIRE data is not being used for this type of analysis, making it difficult to justify the use of funds for statewide collection of the data on all public roads.

Therefore, while there are no plans in place for how to collect missing MIRE data elements on local agency roadways at this time, the state will continue to look for alternative data collection methods and will continue to evaluate the potential benefits of having a complete MIRE dataset to justify funding.

Updated 6/26/17

Over the next four to nine years: Unknown: See above response from Local Programs (Matthew Enders).

Our expectation is that data collection and management technologies will include Standard integration tools like SQL and GIS, field inventories, Mobile LiDAR, probe data, and potentially commercial data, etc.
Data collection and stewardship responsibilities will likely fall to WSDOT TDGMO for state routes, CRAB for county roads, and to WSDOT Local Programs for city roads.

The consolidation of all MIRE data into a single data resource at WSDOT is likely to be difficult. Use of standard database technologies (spatial and non-spatial) are likely to be employed, the update cycle is likely to be limited to resources and business drivers within other agencies.

Costs and Resources for Data Collection

The WA State MIRE FDE data is scattered across cities, counties, tribes, state and federal agencies. Each data agency operates in order to meet different business needs, and each uses different technology for collecting and stewarding data. Each data source follows different accuracy standards and different update cycles. Some MIRE FDE are not being collected at all. Harvesting all of the existing data into a homogenous statewide MIRE database would be a very significant undertaking. The magnitude and distribution of cost is unknown.

Developing a new and modern field data collection program, that could be applied on all roads, state wide, is another possibility. This is would also represent a significant cost that has not been estimated.

The cost to complete collection of MIRE FDE data on state routes would require a onetime expenditure of approximately $50,000. Ongoing stewardship of a complete MIRE FDE data resource, on state routes, would require an additional FTE, at an approximate annual cost of $80,000.

At this time, we do not have adequate information to estimate costs for non-state route data collections and stewardship.