IMPLEMENTING WEST VIRGINIA'S

STRATEGIC HIGHWAY SAFETY PLAN

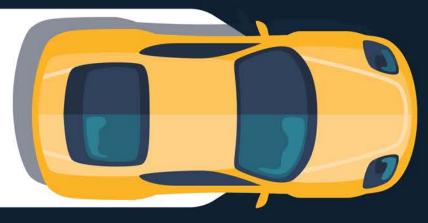
2024 Planning Conference

May 23, 2024

Presentation By: Marsha K. Mays, P.E.

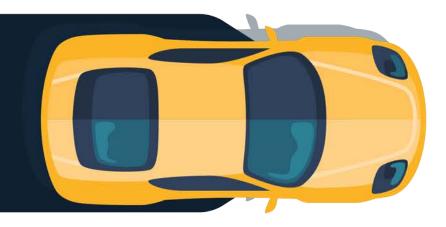
Strategic Safety Planning & Analysis Engineer







Introduction to the WV SHSP



Strategic Highway Safety Plans

- Comprehensive transportation safety plan with a goal of reducing highway fatalities and serious injuries on all public roads
- Establishes consistent statewide goals, objectives, emphasis areas, priorities, and countermeasures with stakeholders and across other transportation plans
- Makes effective use of highway safety related data to determine data-driven priorities
- Addresses engineering, management, operation, education, enforcement, and emergency medical services through common goals and strategies





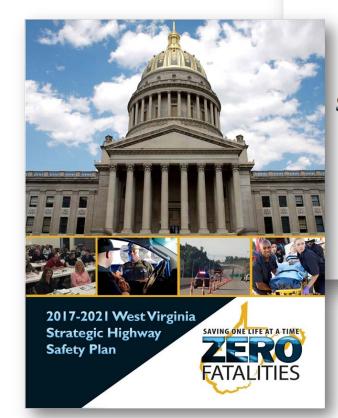
SHSP Requirements

- Multidisciplinary approach and coordination
 - Enforcement, Education, Engineering, and Emergency Medical Services
- Analyze and make effective use of safety data
- Consider the safety needs of all public roads
- Adopt performance-based goals
- Implementation and Evaluation
- FHWA Special Rules
 - High Risk Rural Roads
 - Older Drivers and Pedestrians
 - Vulnerable Road Users
- Plan must describe the update process
- Plan is signed by the Governor's Representative
- Provide strategic direction for other state/local safety plans



WV SHSP History

- First SHSP adopted in 2007
 - Included nine emphasis areas
- Update in 2009
 - Reduced to five emphasis areas
 - Safety Management Task Force oversight
- 2017-2021 West Virginia SHSP
 - Five emphasis areas
 - Adopted Zero Fatalities Vision
- 2022-2026 West Virginia SHSP





West Virginia

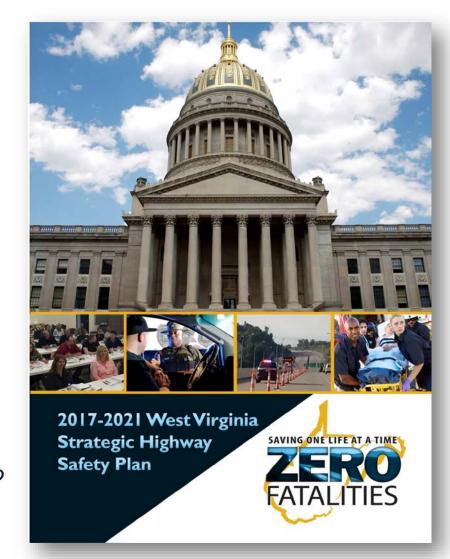
Strategic Highway Safety Plan

September 2007



Why Update?

- Federal requirement, every 5 years
- Evaluate current SHSP
 - Did we achieve our goals?
- Are current goals and objectives appropriate?
- Incorporate new federal requirements and national initiatives
- Review updated crash trends
 - Are our Emphasis Areas still appropriate?
 - Are there new crash data trends that we should address?
- Revise strategies and action plans





Safety Management Task Force Structure



Executive Committee (EA Team Leaders)

Highway Safety Partners
State – Federal – Local - Private

EA 1Speeding &
Aggressive
Driving

EA 2Roadway
Departure

EA 3Occupant
Protection

EA 4 Older Driver (65+) Involved EA 5
Alcohol &
Drug
Impaired
Driving

EA 6 Intersections

EA 7 Pedestrians **EA 8**Improving
Highway
Safety Data



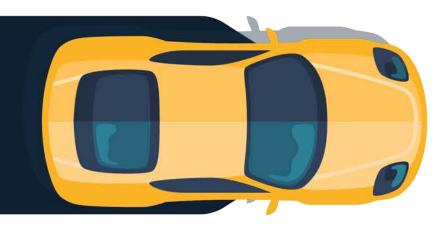
Safety Management Task Force

- Roles and Responsibilities
 - Provide oversight of the SHSP
 - Plan development
 - Implementation
 - Evaluation
 - Provide subject matter expertise within the 4 E's of safety
 - Engineering
 - Education
 - Enforcement
 - Emergency Medical Services
 - Promote effective cooperation, participation, communication, and coordination among agency members





2022-2026 WV SHSP



2022-2026 WVSHSP: Goal and Objective Statements

Goal:

The goal of the West Virginia Strategic Highway Safety Plan is to work cooperatively to improve roadway safety thus eliminating fatalities and serious injuries, through the coordinated efforts of enforcement, education, emergency medical services, and engineering.

Overall Objective:

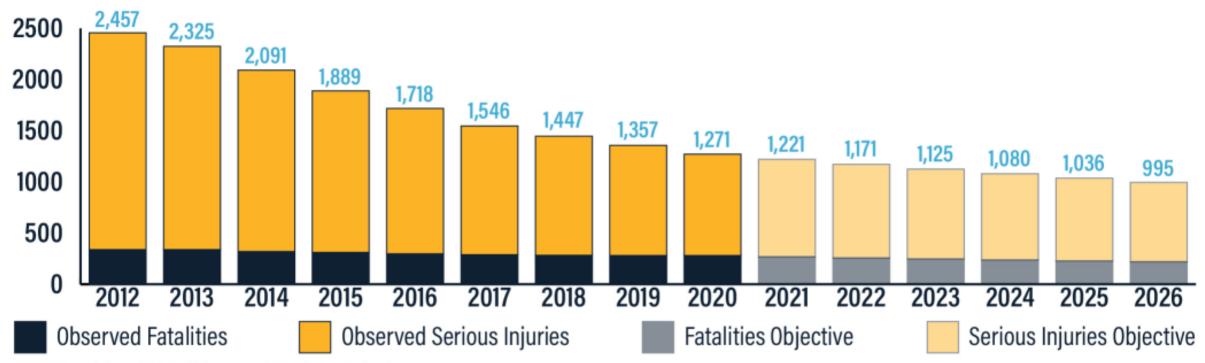
The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.

- Objectives are generally measurable, time-based, and action oriented
- The SMTF agreed on a 4% annual reduction of fatalities and serious injuries and an ultimate objective of zero fatalities by 2050



2022-2026 WVSHSP: Annual Fatalities & Serious Injuries

STATEWIDE FATALITIES AND SERIOUS INJURIES (5-YEAR ROLLING AVERAGES)



XXX Combined Fatalities and Serious Injuries

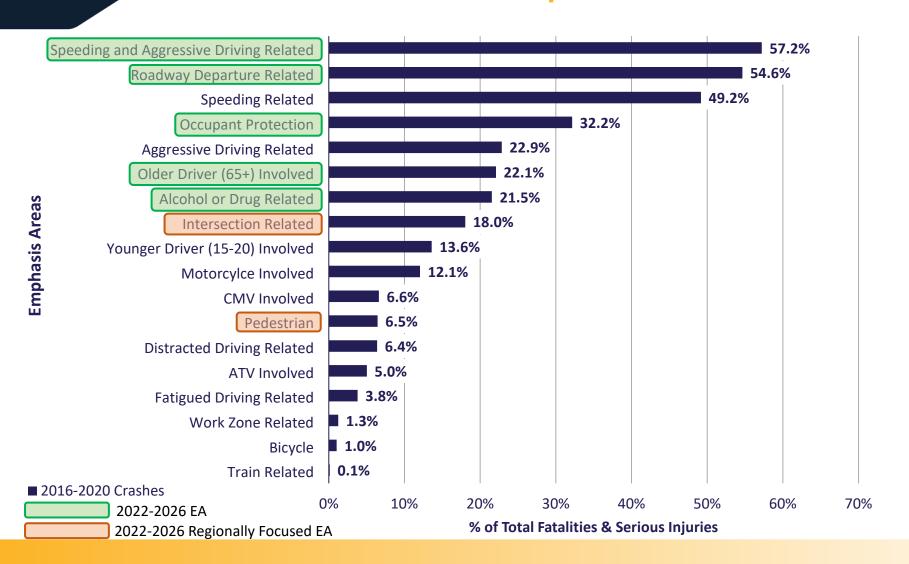


Emphasis Area Selection Process

- Reviewed AASHTO's 22 Emphasis Areas
- Reviewed other statewide safety plans
 - Highway Safety Plan (GHSA)
 - Commercial Vehicle Safety Plan (WV Public Service Commission)
- Reviewed 2016-2020 fatality and serious injury crashes for each potential Emphasis Area
- Ranked and selected Emphasis Areas with higher percentages of fatalities & serious injuries
- Determined appropriate number of Emphasis Areas to include in plan



2022-2026 Selected Emphasis Areas



Data-Driven EAs

- Speeding & Aggressive Driving
- 2. Roadway Departure

Occupant Protection

- 3. (Seatbelts, Helmets & Child Restraints)
- 4. Older Driver (65+) Involved
- 5. Alcohol and Drug Impaired Driving
- 6. Regionally Focused EA-Intersections
- 7. Regionally Focused EA Pedestrians

Non Data-Driven EA

1. Improving Highway Safety Data



2022-2026 Selected Emphasis Areas

- Data-Driven Emphasis Areas Account for
 - 98% of all fatalities
 - 95% of all serious injuries
- Emphasis Areas retained from previous SHSP
 - Speeding & Aggressive Driving
 - Roadway Departure
 - Occupant Protection
 - Alcohol and Drug Impaired Driving
 - Improving Highway Safety Data
- New Emphasis Areas
 - Older Driver Involved
 - Intersections Regionally Focused
 - Pedestrians Regionally Focused

Data-Driven EAs

- Speeding & Aggressive Driving
- 2. Roadway Departure

Occupant Protection

- 3. (Seatbelts, Helmets & Child Restraints)
- 4. Older Driver (65+) Involved
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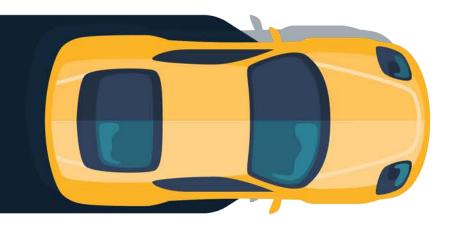
Non Data-Driven EA

1. Improving Highway Safety Data





2022-2026 WV SHSP Implementation Plan



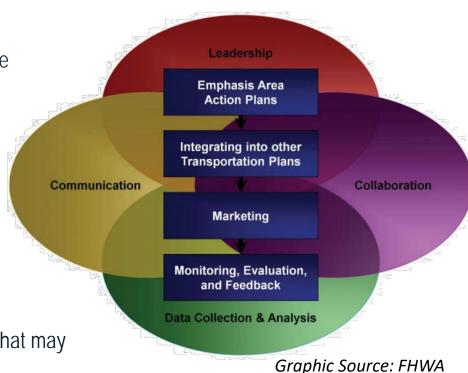
WVSHSP Emphasis Area Implementation Plan

Purpose of an EA Implementation Plan

 Identify key actions for each EA strategy that can be implemented to reduce fatalities and serious injuries

- Provides a collaborative approach to addressing a particular safety concern
 - Continue to foster multidisciplinary, multimodal, and collaborative relationships for improving safety
 - Integrate the 4 E's into a transportation safety problem
- Provides the opportunity to identify champions for each EA and each action
- Provides the opportunity to strategic funding opportunities, possibly those that may not have been considered in the past

 Allows for coordination with other transportation planning processes and integration of safety improvements into other transportation projects and programs





WVSHSP Emphasis Area Implementation Plan

- Emphasis Area Champions
 - Identified appropriate Champion for each Emphasis Area
 - Champions lead the implementation of the Emphasis Area
 - Work with team to identify appropriate actions
 - Identify champions for each action (individual or agency level)
 - Prioritize implementation of actions
 - Work with appropriate agencies to seek funding or grant opportunities
 - Track implementation progress
 - Provide updates to the Safety Management Task Force



Developing Emphasis Area Implementation Plans

- Reviewed EA strategies from SHSP
- Identified actions to implement under each strategy
- Identified appropriate performance measures for implementation of action
 - Specific
 - Measurable
 - Action-Oriented
 - Reasonable
 - Time Bound
 - Consistent with WVSHSP Goal and Objectives
- Identified champions or leads for each action
 - Individual or agency level



WVSHSP Emphasis Area Implementation Plans

- Developing an EA Implementation Plan
 - Example



Emphasis Area Strategies: Roadway Departure

- Implement proven engineering countermeasures to reduce the likelihood of vehicles leaving a travel lane.
- Implement proven engineering countermeasures to improve the roadside environment, minimizing the consequences of leaving the roadway.
- 3. Develop and distribute consistent public information regarding implementation of new engineering treatments.
- 4. Improve incident management and response to incidents by improving data sharing and enhancing incident management training to improve incident clearance times and reduce the likelihood of secondary incidents.

- Possible actions
 - Install high-friction surface treatment on curves
 - Install shoulder rumble strips on two-lane roads
 - Develop a systemic program for implementing median barrier on divided highways



WVSHSP Emphasis Area Implementation Plans

- Developing an EA Implementation Plan
 - Example Roadway Departure EA
- Possible actions
 - Install high-friction surface treatment on curves
 - Install shoulder rumble strips on two-lane roads
 - Develop a systemic program for implementing median barrier on divided highways



- Measurable/Time Based
 - Install high-friction surface treatment on 20 curves in high-risk areas (as identified by risk factors or crash data) annually
 - Install 500 miles of shoulder rumble strips on two-lane roads with shoulders greater than 8 feet wide in Kanawha County in 2024
 - Develop a systemic program for implementing median barrier on divided highways
 - In 2024 perform research and develop systemic program criteria
 - In 2025 perform network screening based on systemic program criteria. Identify 20 sites for preliminary engineering study. Secure construction funding
 - In 2026 Design and implement 100 miles of median barrier



WVSHSP Emphasis Area Implementation Plan

- Developing an EA Implementation Plan
 - EA Team Meetings
 - Initial meeting identify actions and performance measures
 - Schedule recurring meetings to discuss progress
 - WRA to support EA Team Meetings and Implementation Plan development
- EA Implementation Plan Tracking
 - EA Teams to track progress
 - Determine appropriate tracking frequency, 6 months, annual, others
 - Develop tracking log WRA to support
- EA Implementation Plan Communication
 - Champion to attend SMTF meetings and report on progress
 - Identify barriers to achieving progress
 - Highlight best practices, things that are working



2022-2026 SHSP: Implementation Plan

- Implementation Plan considerations
 - Countermeasures
 - Continue implementation of current WV best practices
 - Crash modification clearinghouse
 - NHTSA's Countermeasures that Work
 - FHWA's Proven Safety Countermeasures

Speed Management





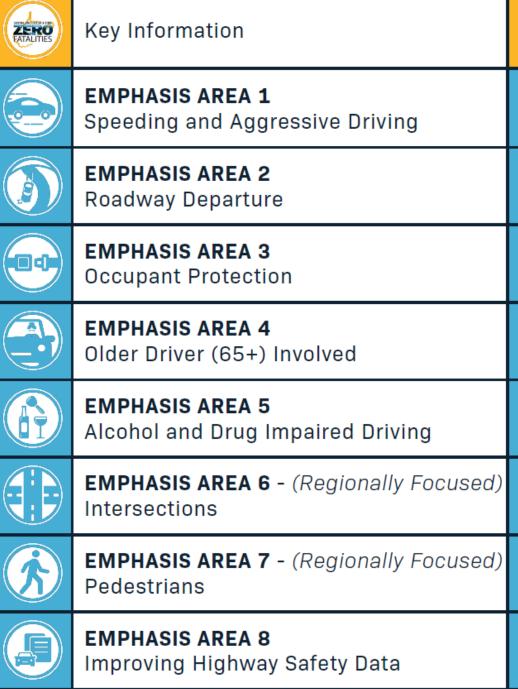


- Safe Systems Approach
- Data Needs
- Overlaps with other Emphasis Areas





2022-2026 SHSP: Implementation Plan





2022-2026 SHSP: Implementation Plan

Category Key				
.0	Engineering highway planning, design, construction, operations, and maintenance			
	Enforcement	high-visibility enforcement, state and local police agencies, targeted enforcement programs		
	Education	driver training, citizen advocacy groups, educators, prevention specialists		
	Emergency Medical Services (EMS)	first responders, paramedics, fire, and rescue		
≫	Highway Safety Data Improvement	Data improvements to increase the accuracy, reliability, timeliness, and accessibility of highway safety data		

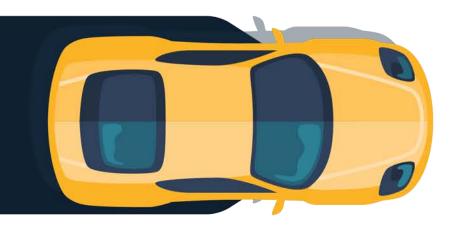




Speeding & Aggressive Driving

Emphasis Area 1

Sgt. Eric McClung, State Police - Team Leader



Speeding & Aggressive Driving: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Speeding & Aggressive Driving EA Objective:

Reduce speeding & aggressive driving related fatalities and serious injuries by 4% annually over the next five years, from 741 to 580.

- Emphasis Area Objective:
 - Consistent with overall objective
 - Provides an aggressive, measurable objective for the next five years
 - Measured from the average 2016-2020 crash data
 - Combined fatalities & serious injuries



Speeding & Aggressive Driving: Strategies



Emphasis Area Strategies: Speeding and Aggressive Driving

- Conduct effective speeding and aggressive driving enforcement activities.
- Explore the viability of implementing an automated speed enforcement program.
- Develop and distribute consistent public information messages to increase public awareness of the consequences
 of speeding and aggressive driving.
- 4. Implement proven engineering countermeasures to effectively manage speeds.



*based on 5-year rolling average



Strategy 1 Conduct effective speeding & aggressive driving enforcement activities			
	Action Item	Leading Organization	Category
available grants, for the	s and opportunities, including purchase and maintenance of speed tincluding radar, LIDAR, and speed	DOH & PSC	
Develop a loaner program for speed feedback trailers for use by municipalities.		DOH	
Continue data sharing between the Division of Highways and the State Police regarding speed trailers to incorporate into AASHTOWare Safety.		DOH & PSC	6
Performance Measure Number of speeding and aggressive driving related citations Number of speeding and aggressive driving related crashes			



Strategy 2 Explore the viability of implementing an automated speed enforcement program. FHWA Proven Safety Countermeasure			
	Action Item	Leading Organization	Category
1	with automated speed enforcement ta on the effectiveness of the programs	DOH	9
Performance Measure	Average traveling speedsNumber of speeding and aggressive	ve driving relate	ed crashes



Strategy 3	Develop and distribute consistent public information messaging to increase public awareness of the consequences of speeding and aggressive driving.		
	Action Item	Leading Organization	Category
1	evelop a plan for targeted public about the dangers of speeding and	DOT PR & PSC	
Coordinate with GHSP to display speeding messages on the VMS boards during the GHSP speeding campaigns/mobilizations.		DOH	
Enhance the ability and use of law enforcement in work zones by providing training and education.		DOH & PSC	
Performance Measure	 Number of speeding and aggressive driving crashes in work zones Number of public awareness campaigns focused on speeding and aggressive driving Number of speeding and aggressive driving related crashes 		



Strategy 4	Implement proven engineering countermeasures to effectively manage speeds.		
	Action Item	Leading Organization	Category
Evaluate the feasibility and Variable Speed Limit sign FHWA Proven Safety Cou		DOH	0
Implement engineering countermeasures that have a crash reduction on speeding related crashes.		DOH	9
Performance Measure	 Average traveling speeds Number of speeding and aggressive driving related crashes 		

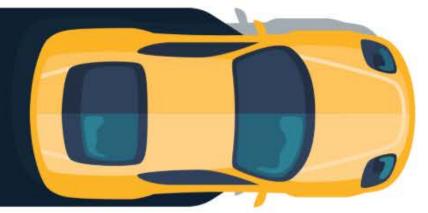




Roadway Departure

Emphasis Area 2

Donna Hardy, WVDOT/DOH - Team Leader







Roadway Departure: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Roadway Departure EA Objective:

Reduce roadway departure related fatalities and serious injuries by 4% annually over the next five years, from 708 to 554.

- Emphasis Area Objective:
 - · Consistent with overall objective
 - Provides an aggressive, measurable objective for the next five years
 - Measured from the average 2016-2020 crash data
 - Combined fatalities & serious injuries





Roadway Departure: Strategies



Emphasis Area Strategies: Roadway Departure

- Implement proven engineering countermeasures to reduce the likelihood of vehicles leaving a travel lane.
- Implement proven engineering countermeasures to improve the roadside environment, minimizing the consequences of leaving the roadway.
- Develop and distribute consistent public information regarding implementation of new engineering treatments.
- Improve incident management and response to incidents by improving data sharing and enhancing incident management training to improve incident clearance times and reduce the likelihood of secondary incidents.





Roadway Departure: Action Plan

Strategy 1 of vehicles leaving a travel lane.			
Action Item	Leading Organization	Category	
Continue the skid testing program to determine appropriate areas for HFST and other skid treatments. Pavement Friction Management is a FHWA Proven Safety Countermeasure	DOH	6	
Continue the use of HFST as a countermeasure to keep vehicles on the road. Pavement Friction Management is a FHWA Proven Safety Countermeasure	DOH	0	
Continue research into use of mumble strips and consider implementation of some test locations. Longitudinal Rumble Strips and Stripes on Two-Lane Roads is a FHWA Proven Safety Countermeasure	DOH	0	
Develop directive to address future maintenance of rumble strips to ensure that after paving projects are completed that they are re-installed. Longitudinal Rumble Strips and Stripes on Two-Lane Roads is a FHWA Proven Safety Countermeasure	DOH	0	
Implement bicycle friendly rumble strips in areas with high bicycle traffic. Longitudinal Rumble Strips and Stripes on Two-Lane Roads is a FHWA Proven Safety Countermeasure	DOH	0	
Continue to evaluate horizontal curve warning signs and suggested speeds. Enhanced Delineation for Horizontal Curves is a FHWA Proven Safety Countermeasure	DOH	6	
Continue to develop criteria that include using Road Weather Information System (RWIS) data in combination with crash data to identify corridors most likely to have roadway departure crashes in inclement weather.	DOL	0	
Re-educate the DOH personnel on the benefits of using Safety Edge. Safety Edge is a FHWA Proven Safety Countermeasure	DOH	0	
Number of roadway departure cra Number of design projects with H included		ven countermeasures	



Roadway Departure: Action Plan

Strategy 2 Implement proven engineering countermeasures to improve the roadside environment, minimizing the consequences of leaving the roadway.			
	Action Item	Leading Organization	Category
removal of fixed object addressing work zone on not park in the clear zo	sting Clear Zone policy including s when possible and add a portion clear zone policies (e.g. workers should ne). Roadside Design Improvements at en Safety Countermeasure	DOH	@
	delineating utility poles within the ign Improvements at Curves is a FHWA neasure	DOH	@
utility pole delineation.	npanies, develop a list of corridors for Roadside Design Improvements at en Safety Countermeasure	DOH	9
	develop a list of corridors for enhanced Barrier is a FHWA Proven Safety	DOH	9
and roadside slopes as possible to eliminate th	s and guidelines on median well as improve slopes where he need for barrier. Roadside hat Curves is a FHWA Proven Safety	DOH	
Re-evaluate passing zo data-driven locations.	ne distances and locations based on	DOH	9
Performance Measure	 Number of hit fixed object crashes Number of passing zone locations of distance criteria 		



Roadway Departure: Action Plan

Strategy 3 Develop and distribute consistent public information regarding the implementation of new engineering treatments.			regarding the
	Action Item	Leading Organization	Category
and aggressive driving, communications and or	n impaired driving, speeding, distracted and drowsy driving atreach campaigns, when applicable, how these behaviors can result in whes.	DOT PR & PSC	
	campaign for the new engineering menting on the roadways.	DOT PR	
Develop a social media campaign targeting how motorists should react when encountering an animal in the roadway to minimize roadway departure crashes.		DOT PR & PSC	
Develop a social media campaign to remind drivers of the importance of having their vehicles inspected.		DOT PR	
Performance Measure	 Number of public awareness camporal crashes Number of roadway departure crashes 		



Roadway Departure: Action Plan

Strategy 4	Improve incident management and response to incidents by improving data sharing and enhancing incident management training to improve incident clearance times and reduce the likelihood of secondary incidents.		
	Action Item	Leading Organization	Category
	ator safety at incident scenes through s and educating Traffic Incident	DOT PR & PSC	
_	outes that have already been can be used when incidents occur.	DOH	6
Continue 511 system enhancements.		DOH	
Evaluate and work on implementation of the HAAS Alert system.		DOH	
Performance Measure	 Number of first responder and tow Average incident response times 	truck operator i	njuries and fatalities

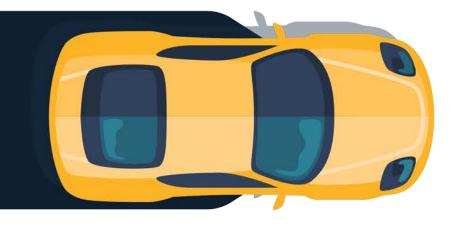




Occupant Protection

Emphasis Area 3

Amy Boggs, WVDOT/DMV/GHSP – Team Leader



Occupant Protection: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Occupant Protection EA Objective:

Reduce occupant protection related fatalities and serious injuries by 4% annually over the next five years, from 417 to 326.

- Emphasis Area Objective:
 - Consistent with overall objective
 - Provides an aggressive, measurable objective for the next five years
 - Measured from the average 2016-2020 crash data
 - Combined fatalities & serious injuries



Occupant Protection: Strategies



Emphasis Area Strategies: Occupant Protection

- 1. Develop and distribute consistent public information regarding the proper use of occupant protection equipment.
- Establish a corporate outreach program to distribute information regarding occupant protection use to reach a broader audience.
- 3. Improve occupant protection use through effective and strategic enforcement practices.



*based on 5-year rolling average

Occupant Protection: Action Plan

Strategy 1	Develop and distribute consistent public information regarding the proper use of occupant protection equipment.		
	Action Item	Leading Organization	Category
Implement the Occupant Protection related community engagement recommendations provided in the West Virginia Triennial Highway Safety Plan.		GHSP	
Complete annual public engagement for seatbelts and one for child restraints.		GHSP	
Performance Measure Number of crashes involving unrestrained motorists Number of crashes involving unrestrained or improperly restrained children			



Occupant Protection: Action Plan

Strategy 2	Establish a corporate outreach program to distribute information regarding occupant protection use to reach a broader audience.		
	Action Item	Leading Organization	Category
Identify companies to sign up for the program.		GHSP	
Send out newsletters to companies registered for the program via email, LinkedIn, etc.		GHSP	
Performance Measure	 Number of companies signed up for the outreach program Types and number off materials distributed through program 		



Occupant Protection: Action Plan

Strategy 3	Improve occupant protection use through effective and strategic enforcement practices.		
	Action Item	Leading Organization	Category
1	rs about the benefits of increasing ts) for seatbelt and helmet violations.	GHSP	
Support legislation for banning passengers from riding in truck beds and other areas not designated for passenger travel.		GHSP	
Educate decision makers on revising the primary seatbelt law to include all passengers in all seating positions.		GHSP	
Conduct high-visibility enforcements in coordination with the goals of the Highway Safety Plan.		WVSP	
Performance Measure	 Number of citations for improperly Number of unrestrained crashes in 		

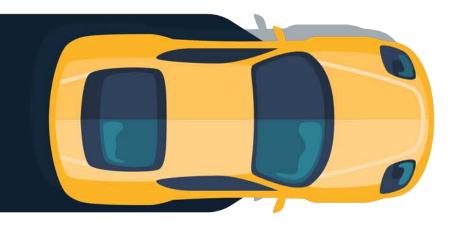




Older Driver (65+) Involved

Emphasis Area 4

Tom Hammonds, WVDOT/DOH – Team Leader



Older Driver (65+) Involved: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Older Driver (65+) Involved EA Objective:

Reduce older driver (65+) related fatalities and serious injuries by 4% annually over the next five years, from 286 to 224.

- Emphasis Area Objective:
 - Consistent with overall objective
 - Provides an aggressive, measurable objective for the next five years
 - Measured from the average 2016-2020 crash data
 - Combined fatalities & serious injuries

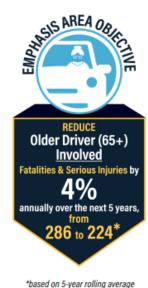


Older Diver (65+) Involved: Strategies



Emphasis Area Strategies: Older Driver (65+) Involved

- 1. Implement education programs that promote proficiency in the driving abilities of older drivers.
- 2. Evaluate the need for changes to driver's license testing requirements focusing on the proficiency of older drivers.
- 3. Implement proven engineering countermeasures to reduce the likelihood of older driver involved crashes.
- Incorporate changes to engineering policies to adopt appropriate design standards that reduce the likelihood of older driver involved crashes.
- 5. Engage additional stakeholders to improve educational outreach to older drivers and their families.





Strategy 1 Implement education programs that promote proficiency in the driving abilities of older drivers.		
Action Item	Leading Organization	Category
Partner with vehicle manufacturers to educate older drivers about vehicle technologies and abilities.	GHSP	
Encourage insurance discounts for safe driving and completing an approved driver improvement course.	DMV, AARP, AAA, & Offices of the Insurance Commissioner	
Encourage the use of continuing mature driver education through insurance incentives.	Offices of the Insurance Commissioner	
Partner with senior living communities, civic organizations, churches and adult continuing education groups to encourage mature driver education including the education on newer traffic components (Rectangular Rapid Flashing Beacons (RRFBs), flashing yellow arrows, roundabouts, etc.)	GHSP	
Performance Measure Number of older driver crashes involved crash	•	ook supplemental course



Strategy 2	Evaluate the need for changes to driver's license testing requirements focusing on the proficiency of older drivers.		
	Action Item	Leading Organization	Category
1	o provide informational pamphlets to rs as they renew their licenses.	GHSP	
Evaluate crash data to identify older drivers in a significant number of crashes in a single year		DMV & DOH	
Performance Measure • Number of older driver involved crashes			



Strategy 3	Strategy 3 Implement proven engineering countermeasures to reduce the likelihood of older driver involved crashes.		
	Action Item	Leading Organization	Category
	nancements for older drivers and fic control devices. Wider Edge Lines y Countermeasure	DOH	0
populations of older roa	Prioritize lighting improvements for areas with dense populations of older road users. Lighting is a FHWA Proven Safety Countermeasure		0
Partner with municipalities to upgrade all signs to increase legibility and retroreflectivity.		DOH	0
Continue to upgrade all signal heads to 12" LED with retro reflective back plates. Backplates with Retroreflective Borders is a FHWA Proven Safety Countermeasure		DOH	0
Performance Measure	 Number of older driver involved cra Number of lighting projects focused older drivers Number of signal heads upgraded Linear feet of wider edge line instal 	d in areas with	dense populations of



Strategy 4	Incorporate changes to engineering policies to adopt appropriate design standards that reduce the likelihood of older driver involved crashes.		
	Action Item	Leading Organization	Category
Target infrastructure improvements at high older driver crash locations or areas with dense populations of older road users.		DOH	6
Implement roadway enhancement for older drivers and increase visibility of traffic control devices. Wider Edge Lines is a FHWA Proven Safety Countermeasure		DOH	0
Performance Measure	Number of older driver involved crashes Number of projects in areas with dense populations of older drivers		



Strategy 5 Engage additional stakeholders to improve educational outreach to older drivers and their families.			nal outreach to older
	Action Item	Leading Organization	Category
	and cost-effective rides provided by for older drivers instead of driving.	WVDOT Division of Multimodal Transportation	
Educate officers on their ability to submit an online form to have an older driver submitted to be re-tested for driving.		WVSP	
Coordinate with AARP for Older Driver Safety week to promote safe driving practices.		GHSP	
Partner with WV Department/Bureau of Senior Services to provide them with educational materials to disseminate to older drivers.		GHSP	
Performance Measure	 Number of older driver involved cra Number of law enforcement officer Number of paratransit rides 		

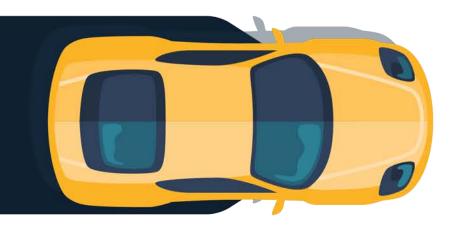




Alcohol and Drug Impaired Driving

Emphasis Area 5

Sgt. Eric McClung, State Police – Team Leader



Alcohol and Drug Impaired Driving: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Alcohol or Drug Related EA Objective:

Reduce Alcohol or Drug Related related fatalities and serious injuries by 4% annually over the next five years, from 279 to 219

- Emphasis Area Objective:
 - Consistent with overall objective
 - Provides an aggressive, measurable objective for the next five years
 - Measured from the average 2016-2020 crash data
 - Combined fatalities & serious injuries

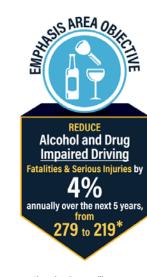


Alcohol and Drug Impaired Driving: Strategies



Emphasis Area Strategies: Alcohol and Drug Impaired Driving

- Conduct targeted high-visibility impaired driving enforcement activities.
- Develop and distribute consistent public information messages to increase public awareness of the laws and dangers of impaired driving.
- 3. Evaluate the feasibility of re-instituting the Administrative Hearings for DUI cases.
- 4. Improve data collection and monitoring of impaired driving trends.



*based on 5-year rolling average



Strategy 1	Strategy 1 Conduct targeted high-visibility impaired driving enforcement activities.		
	Action Item	Leading Organization	Category
areas identified as expe	Conduct high-visibility impaired driving saturation patrols in areas identified as experiencing high instances of impaired driving related fatal and serious injury crashes.		
Determine the feasibility of increasing the number of Drug Recognition Experts (DRE) available.		WVSP	
Increase availability of training for DREs.		GHSP	
Performance Measure	Number of saturation patrols conduNumber of DREs	ucted annually u	inder GHSP



Strategy 2 Develop and distribute consistent public information messages to increase public awareness of the laws and dangers of impaired driving			
	Action Item	Leading Organization	Category
	ting communications materials to target ge underage drinking and/or drug use	DOT PR	S
	ting communications materials ime of issuance on prescription impair their driving.	DOT PR	S
Develop partnerships or free rides.	with rideshares to provide discounted	GHSP	S
Develop list of public a then disseminate for o	and private rideshare opportunities and certain events.	GHSP	S
Partner with drug prev the ongoing drug epid	vention organizations to help address lemic.	GHSP & Dept. of Health	3
	and marijuana distribution centers to onal pamphlets with purchase of drugs.	Dept. of Health	3
Performance Measure Number and type of communication materials developed Number of distribution networks used to disseminate materials and number of materials distributed Number of rideshare partnerships		•	



Strategy 3	Evaluate the feasibility of re-instituting the Administrative Hearings for DUI cases.		
	Action Item	Leading Organization	Category
Compare data before and after the hearings were rescinded to evaluate the need to re-instate Administrative hearings. GHSP & DMV			
Performance Measure	Stats from before and after the Administrative hearings were no longer required		



Strategy 4	Improve data collection and monitoring of impaired driving trends.		
	Action Item	Leading Organization	Category
Develop policies and procedures to improve data sharing between the Impaired Driving Report and crash reports so that crash reports are updated with the information related to impairment status and test results, especially for drugimpaired related crashes.		DOH & Dept. of Health	₹
Develop a procedure to decrease the timeline for getting drug testing information for the crash report.		DOH & Dept. of Health	☆
Performance Measure	 Number of impaired driving crashes Time it takes for drug testing inforn 		led to the crash report

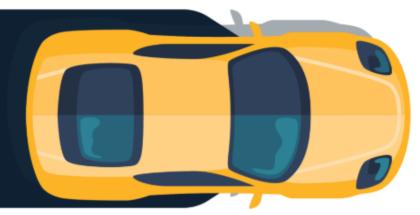




Intersections (Regionally Focused)

Emphasis Area 6

Adam Weiser, WRA – Team Leader







Intersection Related: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Intersection Related EA Objective:

Reduce Intersection Related related fatalities and serious injuries by 4% annually over the next five years, from 234 to 183.

- Emphasis Area Objective:
 - · Consistent with overall objective
 - Provides an aggressive, measurable objective for the next five years
 - Measured from the average 2016-2020 crash data
 - Combined fatalities & serious injuries



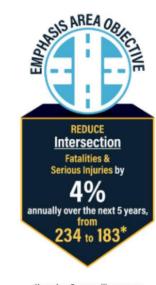


Intersection Related: Strategies



Emphasis Area Strategies: Intersections - Regionally Focused

- Implement high-visibility enforcement initiatives at locations identified as having intersection crash rates higher than the statewide average.
- 2. Explore the viability of implementing an automated red-light running enforcement program.
- Develop and distribute consistent public information messaging to educate the public on traffic laws, new traffic control devices, and intersection safety.
- Reduce the frequency and severity of intersection crashes through operational, geometric, and traffic control device improvements.
- Implement policies and guidelines targeting safety improvements at intersections.



*based on 5-year rolling average



Strategy 1	Implement high-visibility enforcement initiatives at locations identified as having intersection crash rates higher than the statewide average.		
	Action Item	Leading Organization	Category
Evaluate crash patterns at intersections to identify primary contributing factors (e.g. left-turns failing to yield, red light running, etc.).		DOH	9
Support targeted enforcement at traffic signals and stop signs.		WVSP	
Develop a data driven methodology to identify what constitutes a "region" for intersection-related crashes.		DOH	≈
Performance Measure Number of intersection crashes Number of targeted enforcement activities at intersections			



Strategy 2	Explore the viability of implementing an automated red-light running enforcement program.		
	Action Item	Leading Organization	Category
Research other states with automated speed enforcement programs to collect data on the effectiveness of the programs in reducing crashes. Yellow Change Intervals is a FHWA Proven Safety Countermeasure			
Performance Measure	Summarized data on effectiveness of speed enforcement programs in other states		



Strategy 3	Develop and distribute consistent public information messaging to educate the public on traffic laws, new traffic control devices, and intersection safety.		
	Action Item	Leading Organization	Category
Update the driver's manual to reflect current traffic related improvements (e.g. Rectangular Rapid Flashing Beacons (RRFBs), flashing yellow arrow, roundabouts, etc.).		DMV	
Coordinate press releases and social media campaigns to share 'news you can use' (e.g. what to do if a signal is out).		DOT PR	
Evaluate feasibility of advertising information on gas pumps and sides of public transit stops and buses.		DOT PR	
Performance Measure	 Number of press releases and media campaigns promoting intersection safety Updated driver's manual 		



Strategy 4 Reduce the frequency and severity of intersection crashes through operational, geometric, and traffic control device improvement.		
Action Item	Leading Organization	Category
Evaluate turn lane capacities at signalized intersections corridor wide. Dedicated Left- and Right-Turn Lanes at Intersections is a FHWA Proven Safety Countermeasure	DOH	9
Develop Intersection Control Evaluation (ICE) policy.	DOH	9
Prioritize critical corridors for safety audits to identify and implement effective countermeasures. Road Safety Audits are a FHWA Proven Safety Countermeasure	DOH	9
Perform before/after studies to evaluate and identify the most effective treatments for a given crash type/location.	DOH	9
Prioritize critical corridors for signal re-timing and coordination as well as clearance calculation evaluation, including the need for time of day patterns to reflect changes in directional volumes.	DOH	0
Continue implementing HFST to help rutting and intersections with steep grades on approaches.	DOH	0
Evaluate bus stop locations at intersections along corridors to prioritize pedestrian safety.	DOH	0
Performance Measure - Number of intersection fatal and injury crashes - Number of safety audits done on corridors - Number of signal re-timing projects on corridors		



Strategy 5	Implement policies and guidelines targeting safety improvements at intersections.		
	Action Item	Leading Organization	Category
Evaluate the impact of road diets on crashes as well as corridor capacity. Corridor Access Management and Road Diets are FHWA Proven Safety Countermeasures		DOH	6
Evaluate the need for an intersection safety implementation plan.		DOH	6
Performance Measure	Measure Number of road diets and their safety impact Number of intersection fatal and injury crashes		

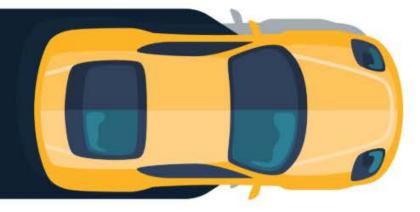




Pedestrians (Regionally Focused)

Emphasis Area 7

Kendra Schenk – Team Leader







Pedestrian Involved: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Pedestrian Involved EA Objective:

Reduce Pedestrian Involved related fatalities and serious injuries by 4% annually over the next five years, from 84 to 65.

- Emphasis Area Objective:
 - Consistent with overall objective
 - Provides an aggressive, measurable objective for the next five years
 - Measured from the average 2016-2020 crash data
 - Combined fatalities & serious injuries



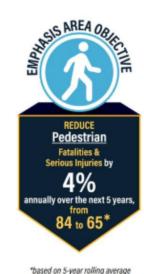


Pedestrian Involved: Strategies



Emphasis Area Strategies: Pedestrians - Regionally Focused

- Develop and distribute consistent public information messages to educate the public about pedestrian safety.
- 2. Develop educational training programs to improve pedestrian safety awareness.
- Install proven engineering countermeasures to improve pedestrian safety.
- Develop policies and/or guidelines to support pedestrian safety measures.



based on 5-year rolling average



Pedestrian Involved: Action Plan

Strategy 1	Develop and distribute consistent public information messages to educate the public about pedestrian safety.		
	Action Item	Leading Organization	Category
Increase targeted public outreach based on specific data- driven trends (impairment, visibility, etc).		DOT PR	
Increase awareness regarding pedestrian infrastructure improvements and incorporate educational outreach in conjunction with implementation of pedestrian improvement projects.		DOT PR	0
Performance Measure	rformance Measure Number of pedestrian improvement projects Number of public outreach campaigns and social media campaigns		



Pedestrian Involved: Action Plan

Strategy 2	Develop educational training programs to improve pedestrian safety awareness.		
	Action Item	Leading Organization	Category
Incorporate pedestrian (and other vulnerable road users) laws and rules of the road into Drivers Education and Defensive driving curricula.			
Performance Measure • Number of pedestrian crashes involving younger drivers			



Pedestrian Involved: Action Plan

Strategy 3 Install proven engineering countermeasures to improve pedestrian safety.		
Action Item	Leading Organization	Category
Implement recommendations from the West Virginia Vulnerable Road User (VRU) Safety Assessment.	DOH	9
Continue to upgrade pedestrian signal heads to countdown displays and install pedestrian warning signs under larger signal construction projects.	DOH	6
Develop a data driven methodology to identify what constitutes a "region" for pedestrian-related crashes.	DOH	<u></u>
Performance Measure • Number of pedestrian crashes		



Pedestrian Involved: Action Plan

Strategy 4 Develop policies and/or guidelines to support pedestrian safety measures.		
Action Item	Leading Organization	Category
Coordinate Memorandum of Understanding (MOU) for clarifying the stipulation that resurfacing/construction projects must "consider pedestrians" in order to assure that pedestrian improvements are being included in those projects.	DOH	6
Support VRU recommendation to develop a statewide policy for accommodating e-scooters.	DOH	9
Performance Measure - Complete MOU		

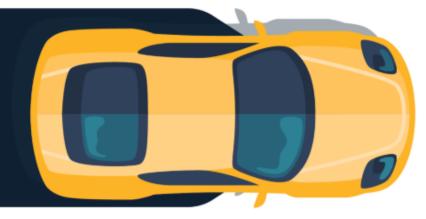




Improving Highway Safety Data

Emphasis Area 8

Marsha Mays, WVDOT/DOH - Team Leader







Improving Highway Safety Data: Emphasis Area Objective

Overall Objective:

The objective of the 2022-2026 West Virginia Strategic Highway Safety Plan is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways. This will be achieved by reducing fatalities and serious injuries 4% annually over the next five years.



Improving Highway Safety Data Objective:

Improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of highway safety data





Improving Highway Safety Data: Strategies



Emphasis Area Strategies: Improving Highway Safety Data

- 1. Enhance highway safety data analysis through improvements to crash data collection and analysis capabilities.
- Enhance highway safety data analysis through improvements to citation and adjudication data collection and analysis capabilities.
- Enhance highway safety data analysis through improvements to injury surveillance data collection and analysis capabilities.
- 4. Enhance highway safety data analysis through continued improvements to the Roadway Information Systems.
- Enhance highway safety data analysis through improvements to the vehicle licensing and registration system.
- Enhance highway safety data analysis through improvements to the driver licensing system.
- Improve overall data analysis capabilities through enhanced integration and coordination of the various highway safety data systems.
- 8. Improve overall highway safety data collection and analysis capabilities by developing training programs that educate users and collectors of highway safety data to enhance data collection and analysis capabilities.
- Investigate legislation and policy changes related to highway safety data including electronic reporting requirements.



Strategy 1	Enhance highway safety data analysis through improvements to crash data collection and analysis capabilities.		
	Action Item	Leading Organization	Category
_	AASHTOWare Safety including s and outside agencies as it becomes	DOH	₹
Update State's Uniform MMUCC standards.	Crash Report to meet most recent	DOH	₹
Evaluate needed improvements to the Crash Data Collection Software and the State Crash Records Database.		≈	
Performance Measure Completion of AASHTOWare Safety integration Number of other agencies trained on AASHTOWare Safety			



Strategy 2 Enhance highway safety data analysis through improvements to citation and adjudication data collection and analysis capabilities.		
Action Item	Leading Organization	Category
Complete rollout of the electronic citation to all law enforcement agencies after new system is selected.	DOH	
Provide the courts with enhanced capabilities to determine prior convictions and outstanding charges on a statewide level by completing the implementation of the West Virginia Administrative Office of the Supreme Court of Appeals (AOSCA) Unified Judicial Application (UJA) to unite all magistrate, circuit and family courts into one data system.	WV Supreme Court of Appeals	≈
Address issues regarding driver conviction submission to DMV for the State's municipal courts.	DMV	≈ 5
Address issues on Commercial Driver License (CDL) conviction submission to DMV from all state courts.	DMV & PSC	≈
Improve location data on citation to include more than county and road information.	DOH	≈
Develop and implement tools and methodologies for citation and adjudication data analysis to enable their use within the AASHTOWare Safety software as well as the new crash reporting system.	DOH	<u></u>
Performance Measure - Completion of new electronic citati	on system	



Strategy 3	Enhance highway safety data analysis through improvements to injury surveillance data collection and analysis capabilities.		
	Action Item	Leading Organization	Category
Improve the timeliness crash victims.	of completing death certificates for	Dept. of Health	₹
	for getting toxicology results od, type of drug and toxication level for	Dept. of Health	≈
Improve coordination with Department of Health and Human Resources (DHHR) to improve data sharing capabilities.		Dept. of Health	≈
Performance Measure	 Wait time for death certificates to b Wait time for toxicology results 	e received	



Strategy 4	Enhance highway safety data through continued improvements to the Roadway Information Systems.		
	Action Item	Leading Organization	Category
Continue to fully implen	ment the MIRE FDE data requirements.	DOH	\gtrsim
Complete the development and implementation of a transportation asset management system.		DOH	≈ 5
Fully implement intersection inventory.		DOH	≈ 3

Continue implementing improvements to the roadway inventory for ramps, including implementation of MIRE FDE data requirements for ramp facilities.		DOH	☆
Continue implementation of MIRE FDE data requirements for non-state-maintained roads.		DOH	≈
Enhance integrated roadway information with CMVs.		DOH & PSC	☆
Improve Traffic Monitoring Systems (volume, classification, weight, and speed).		DOH	☆
Improve safety data integration into ITS and 511 system.		DOH	☆
Improve coordination with WVDOH Commissioner's office in order to address the issue of completed Commissioner orders for new roads and speed limit changes never getting signed/implemented.		DOH	<u>≈</u>
Performance Measure Compliance with MIRE FDE requirements Completed Transportation asset management system Completed intersection inventory Number of processed Commissioner's orders			em



Strategy 5	Enhance highway safety data analysis through improvements to the vehicle licensing and registration system.		
	Action Item	Leading Organization	Category
Update and modernize	the State's vehicle registration system.	DMV	₹
Integrate the State's vehicle registration system with other highway safety data systems.		DMV & DOH	₹
Performance Measure Updated vehicle registration system			



Strategy 6	Enhance highway safety data analysis through improvements to the driver licensing system.		
	Action Item	Leading Organization	Category
Update and modernize	the State's Driver Licensing System.	DMV	$\stackrel{\sim}{\sim}$
	river licensing system with other for enhanced highway safety data	DMV & DOH	\sim
_	dization of the State's various interlock dard dataset to allow for the easy data.	DMV	\sim
Performance Measure	Updated driver license system		



Strategy 7 Improve overall data analysis capabilities through enhanced integration and coordination of the various highway safety data systems.			
	Action Item	Leading Organization	Category
Update the State's Tr	affic Records Plan.	GHSP	\approx
Develop an organizat data systems.	ion chart of state highway safety related	DOH	≈
Develop and update of systems.	data dictionary for all state highway	DOH	≈
Develop performance	e measures for all traffic record data.	DOH	\approx
Data Governance Cor	ver a formalized Highway Safety Related mmittee (Technical TRCC) to ensure data exists between related data	GHSP	≈
Clearinghouse to hou inventoried data syst	Safety Related Data Information use information (metadata) on all of the ems, responsibilities for each system sets for use in analysis.	DOH	≈
Performance Measu	Completed Traffic Records Plan Completed organization chart Completed data dictionary		



Strategy 8	Improve overall highway safety data collection and analysis capabilities by developing training programs that educate users and collectors of highway safety data to enhance data collection and analysis capabilities.		
	Action Item	Leading Organization	Category
law enforcement agend	h a point of contact from all necessary cies that can be used to disseminate including best practices.	WVSP & PSC	₹
Continue AASHTOWare Safety training including the ability for an on-demand option.		DOH	\approx
Develop and enhance e	existing training documents for new ems.	DOH	\approx
Performance Measure • Number of AASHTOWare Safety trainings completed			



Strategy 9	Investigate legislation and policy changes related to highway safety data including electronic reporting requirements.		
	Action Item	Leading Organization	Category
Support new roadway s through the use of high	afety programs/legislative changes way safety data.	DOH	<u></u>
Review, and when needed, update legislative requirements for data supporting highway safety.		₹	
Performance Measure • Number of new roadway safety programs/legislative changes			



Questions?

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