

# APPENDIX H - Occupant Protection/Motorcycles Action Plan

## Introduction

*Occupant Protection* is one of nine emphasis areas of the North Carolina Strategic Highway Safety Plan. This emphasis area focuses on serious injuries and fatalities for unrestrained occupants in passenger vehicles. Motorcycle-involved crashes are also included in this emphasis area.

## State of the Problem

Approximately 40 percent of all traffic fatalities in North Carolina involve an unrestrained occupant. Table H-1 presents the fatalities and serious injuries from unrestrained occupants in passenger vehicles. The total fatalities and serious injuries in passenger vehicles are also presented. From 2009 – 2013, there have been an average of 433 unrestrained fatalities per year in collisions involving passenger vehicles in North Carolina. The unrestrained fatalities persistently remain around 35 to 40 percent of all traffic fatalities in passenger vehicles. The lack of seatbelt use by all occupants remains a problem; among the most likely groups to be involved in a fatal crash where the occupant was not wearing a seatbelt are those ages 20-24, males, and pickup truck drivers. The percent of fatal crashes with an unrestrained passenger is highest at night and often occurs in the most populated counties and in counties in the southeastern part of the State. North Carolina recently celebrated the 20th anniversary of the “Click It or Ticket” seat belt enforcement campaign. This program is instrumental in creating awareness of the risks of unrestrained driving and the North Carolina seatbelt law; however, it will likely need to target specific

demographic groups and geographic areas to improve the use of seatbelts statewide.

Motorcycle crashes appear to be increasing in North Carolina from just ten years ago. In 2003, there were 101 motorcycle fatalities. In 2013, there were 149 motorcycle fatalities, as presented in Table H-2, with an average of 350 serious injuries and 155 fatalities occurring each year from 2009 – 2013. Nearly half of all motorcycle crashes in North Carolina involve those age 41 and older. Helmet use is high even in fatal crashes, where approximately 90 percent of motorcyclists were wearing a helmet. However, it is not known if the helmet was DOT-approved. Geographically, motorcycle crashes occur most frequently in the far western part of the State—North Carolina’s mountain corridors offer scenic beauty but also increased risks due to abrupt changes in horizontal and vertical alignments—the most populated counties, and in counties with military bases.

## Emphasis Area Goals

In 2013, there were 411 fatalities and 467 serious injuries from crashes of unrestrained occupants in passenger vehicles and 149 motorcycle fatalities and 310 serious injuries in North Carolina. The goals of this action plan are to reduce fatalities and serious injuries in North Carolina that are related to occupant protection and motorcycles.

## Strategies and Supporting Actions

The following section outlines strategies needed to achieve the desired goals of improved safety with regard to occupant protection. They are not

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**Table H-1:** North Carolina Unrestrained Crash Trends (2009 – 2013) for Passenger Vehicles.

	2009	2010	2011	2012	2013
<b>Unrestrained Fatalities</b>	468	468	422	400	411
<b>Total Fatalities</b>	1,235	1,201	1,096	1,124	1,135
<b>Unrestrained Serious Injuries</b>	628	543	504	529	467
<b>Total Serious Injuries</b>	2,186	2,034	2,124	2,018	1,901

**Table H-2:** North Carolina Motorcycle Crash Trends (2009 – 2013).

	2009	2010	2011	2012	2013
<b>Motorcycle Crashes</b>	3,635	3,786	4,118	4,157	3,790
<b>Motorcycle Serious Injuries</b>	392	336	354	365	310
<b>Motorcycle Fatalities</b>	152	172	143	161	149

proposed as isolated, standalone measures. Rather, to effectively address occupant protection on North Carolina’s road network, coordinated and concerted efforts statewide across agencies and partners are required.

Listed below each strategy are several recommended actions to support it, as well as one or more North Carolina agencies identified as having a potentially significant role in its implementation and the current status of the action.

## Strategy 1

**Improve enforcement strategies to increase seatbelt use.**

### Supporting Actions

1. Continue to use data to promote the importance of occupant protection enforcement to law enforcement (e.g., demonstrate previous successes

in enforcement efforts and how these efforts can result in other benefits such as crime suppression).

*Potential Implementing Agencies:*

GHSP, NCDOT, HSRC

*Status:* In progress

2. Use data to direct enforcement efforts to target specific locations, times, or high-risk groups.

*Potential Implementing Agencies:*

GHSP, Law enforcement

*Status:* In progress

3. Increase knowledge about occupant protection laws and possible enforcement actions among law enforcement officers through “roll call” videos, educational materials, and other reference materials.

*Potential Implementing Agencies:*

GHSP, Law enforcement

*Status:* In progress

4. Work with the North Carolina court systems to address issues that may undermine enforcement efforts, such as the reduction and dismissal of charges.

*Potential Implementing Agencies:*

GHSP, District Attorneys, Law enforcement

*Status:* In progress

## Strategy 2

**Identify high-risk counties and demographic groups to inform specific countermeasures and messaging.**

### *Supporting Actions*

1. Expand the use of geocoding to more efficiently identify high-risk locations.

*Potential Implementing Agencies:*

NCDOT, GHSP, NCSHP

*Status:* Needed

2. Continue to support and expand the use of observational and survey data on the local level to measure seatbelt use and program effectiveness.

*Potential Implementing Agencies:* GHSP

*Status:* In progress

## Strategy 3

**Continue current messaging and develop new messaging and education programs promoting seatbelt use focusing on high-risk locations or groups.**

### *Supporting Actions*

1. Continue the “Click It or Ticket” program, and consider creating new media marketing campaigns to refresh the messaging and target specific groups or locations (e.g., males ages 18-34, counties with a high number of

unrestrained fatalities, or at the State borders).

*Potential Implementing Agencies:*

GHSP, Law enforcement

*Status:* In progress

2. Develop materials and countermeasures targeting high-risk locations and groups (e.g., messaging in multiple languages or that target pickup truck drivers).

*Potential Implementing Agencies:*

GHSP, Law enforcement

*Status:* In progress

3. Work with the NC Department of Public Instruction to include seatbelt use in health education, especially for pre-teens and teenagers.

*Potential Implementing Agencies:* GHSP, NCDPI

*Status:* Needed

4. Develop occupant protection materials and resources in a variety of languages to ensure that multiple populations have access to the information.

*Potential Implementing Agencies:* GHSP, HSRC

*Status:* In progress

5. Include seatbelt use in health education for commercial truck drivers.

*Potential Implementing Agencies:* NC DHHS

*Status:* Needed

6. Continue to support and promote the importance of occupant protection and safety from birth, focusing on child passenger safety through proper use of car seats and booster seats.

*Potential Implementing Agencies:*

GHSP, NCDOT/OSFM, HSRC

*Status:* In progress

## MOTORCYCLES

### Strategy 4

**Continue to support and promote North Carolina's strong motorcycle helmet law.**

#### *Supporting Actions*

1. Continue to monitor legislative actions that have potential to weaken the helmet law in North Carolina.

*Potential Implementing Agencies:*

GHSP, Advocacy groups

*Status:* In progress

2. Provide messaging to promote the importance of DOT-compliant helmet use.

*Potential Implementing Agencies:* GHSP

*Status:* Needed

3. Continue to support the motorcycle helmet law as a statewide priority by emphasizing safety data.

*Potential Implementing Agencies:*

GHSP, Law enforcement, HSRC

*Status:* In progress

4. Continue to support the motorcycle helmet law as a statewide priority by estimating the associated economic costs and communicating them to key decision-makers.

*Potential Implementing Agencies:* DHHS

*Status:* In progress

5. Explore the possibility of creating a field on the NCDMV 349 crash reporting form to include information stating whether a DOT-compliant helmet was used.

*Potential Implementing Agencies:* GHSP, NCDMV

*Status:* Needed

### Strategy 5

**Continue to promote motorcycle safety in North Carolina.**

#### *Supporting Actions*

1. Encourage lifelong training and other behavioral countermeasures (e.g., the use of reflective clothing) through developing partnerships with dealers, manufacturers, convenience stores, event organizers, and clubs.

*Potential Implementing Agencies:* GHSP, Law enforcement, Advocacy groups, Dealer networks, Event organizers, Motorcycle clubs

*Status:* In progress

2. Evaluate existing programs to identify if they are effective at reducing serious injury and fatal crashes.

*Potential Implementing Agencies:* NCDOT

*Status:* Needed

3. Develop strategies for increasing safety for motorcyclists visiting North Carolina, including roadway-based countermeasures such as optical speed bars in advance of hazardous locations, safety messaging, and mobile enforcement teams.

*Potential Implementing Agencies:* NCDOT

*Status:* In progress

4. Increase awareness of the dangers of impaired motorcycle riding to both riders and law enforcement.

*Potential Implementing Agencies:*

GHSP, Law enforcement, HSRC

*Status:* Needed

5. Provide law enforcement with materials on how to identify impaired riding and other behaviors that contribute to crashes.

*Potential Implementing Agencies:*

GHSP, Law enforcement, HSRC

*Status:* Needed

## Strategy 6

**Identify high-risk counties and demographic groups to inform specific countermeasures.**

### *Supporting Actions*

1. Expand crash mapping to geocode all motorcycle crashes in North Carolina.

*Potential Implementing Agencies:* NCDOT

*Status:* Needed

2. Improve the crash data reporting system to be more specific on the differences among motorcycles, mopeds, and scooters, and the use of approved helmets with each.

*Potential Implementing Agencies:* GHSP, NCDMV

*Status:* Needed

## Working Group Members

The working group for this emphasis area includes the following representatives from four agencies committed to achieving the goals of this Action Plan:

- Debra Collins, North Carolina Department of Transportation
- Josh DeFisher, Governor's Highway Safety Program
- Bill Hall, UNC Highway Safety Research Center
- Sheila Higgins, Department of Health and Human Services
- Bevan Kirley, UNC Highway Safety Research Center
- Craig Moss, Governor's Highway Safety Program
- Don Nail, Governor's Highway Safety Program
- Chris Oliver, North Carolina Department of Transportation

## Supporting Material

The following are considered valuable resources to the implementation of the Occupant Protection/Motorcycles Emphasis Area Action Plan:

- North Carolina Governor's Highway Safety Program Initiatives.  
<http://bit.ly/1CfEatD>
- NHTSA's Countermeasures that Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices.  
<http://bit.ly/1AbynCV>
- North Carolina's FY2015 – FY2016 Occupant Protection Program Plan
- "Investigating a Unique Motorcycle Crash Cluster: Problem Identification for Graham County Motorcycle Crash Concentration." University of North Carolina Highway Safety Research Center. September 2013.
- North Carolina BuckleUpNC Resource Center  
[www.buckleupnc.org](http://www.buckleupnc.org)
- Crash Modification Factors Clearinghouse  
<http://www.cmfclearinghouse.org/>