

# **MOTORCYCLE RIDER SAFETY TASK FORCE**

## **Final Report**

June 30, 2006

# Motorcycle Rider Safety Task Force

## Overview

The sale of motorcycles has been vigorous in recent years. More Americans are driving motorcycles now than in any time in history. Nationally the number of registered vehicles has increased 25% in the last decade. In Washington State in the same period, the number of registered vehicles is up more sharply -- nearly 75%. At the same time, the number of fatalities and serious injuries has also risen in Washington and elsewhere. Congress recently funded a comprehensive study of increased motorcycle rider deaths and injuries, and states across the country have begun trying to figure out how to understand and counteract this trend.

In late November 2005, three state agencies comprising the Public Safety Team (Department of Licensing, Washington State Patrol and Washington Traffic Safety Commission) briefed Governor Gregoire on risk factors associated with traffic safety. One focus of that briefing was the rising rate of fatalities among motorcyclists. Governor Gregoire requested that the state agencies undertake efforts to reduce fatalities by 10. In January 2006 the Department of Licensing created a task force of interested parties to assess the factors that led to the increase in fatalities and injuries and develop a set of recommendations to counter this trend. This task force included members of motorcycle rider groups and state agency representatives, including the public safety agencies, the Department of Transportation, and the Department of Health.<sup>1</sup> The task force adopted the following goal as the primary guide for its work:

*Task Force Goal:*

To determine primary causes for motorcycle collisions and crashes, and provide recommendations that will reduce fatalities or serious injuries.

## Executive Summary

The task force spent its early meetings reviewing information that had been compiled from a set of databases kept by state agencies. This information formed the basis of the recommendations that emerged from the group.

Data reviewed by the Task Force indicated that:

- The vast majority of fatalities occur during daylight hours, in dry weather.

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<sup>1</sup> See Appendix A for a list of Task Force members.

- More than 80% of fatalities occur between April and September, prime months for motorcycling.
- Half of fatal crashes were single vehicle occurrences; no other vehicle was involved other than the motorcycles. When alcohol is involved, two-thirds of fatal crashes are single vehicle occurrences.
- The most common contributing factors to motorcycle fatalities, based on law enforcement scene reports, are lane error, speeding, alcohol and inattention.
- A third of fatalities were motorcyclists who did not have a valid motorcycle endorsement.

### **Conclusion**

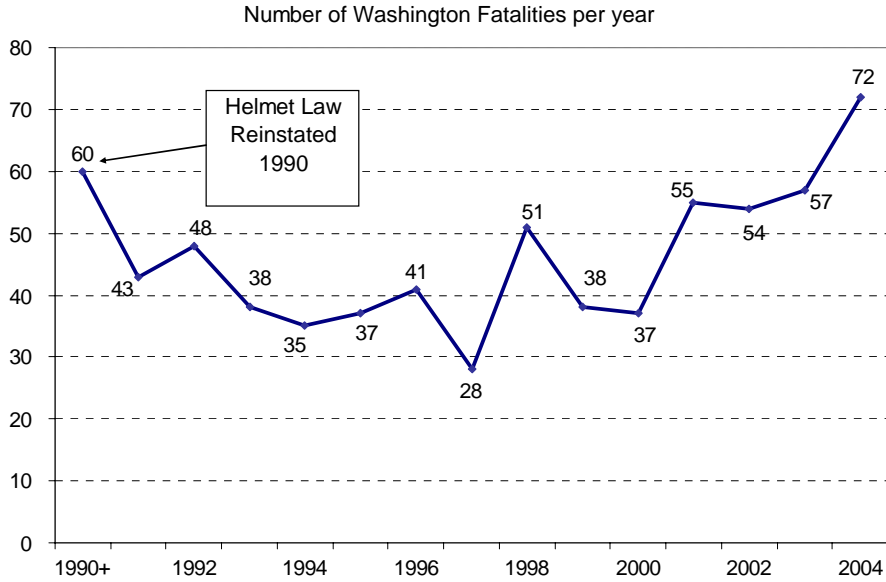
The Task Force concluded that, while there are multiple contributions to motorcycle crashes that result in fatalities or serious injuries, it appears that the most important factors are within the control of the rider. Efforts to reduce fatalities and serious injuries should focus on rider skill and behavior.

## Review of Fatalities and Injury Data

1. Motorcycle fatalities are rising. Fatalities have increased from 28 in 1997 to 72 fatalities in 2004.<sup>2</sup> [Attachment 1]

### *Rising Number of Motorcyclist Fatalities*

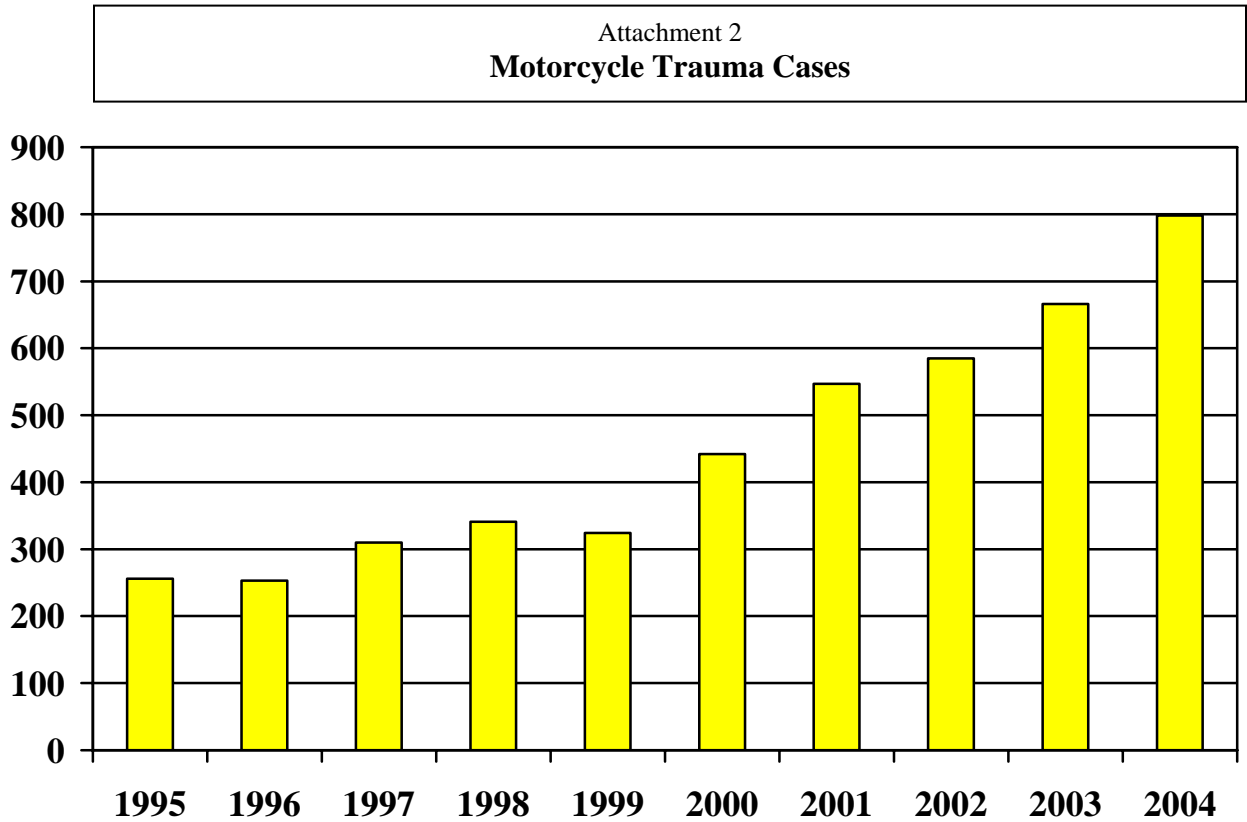
Attachment 1



Source: FARS

<sup>2</sup> 2004 is the most current year that certified data are available. The source of the data is the Fatal Analysis Reporting System (FARS).

2. Serious motorcycle trauma injuries<sup>3</sup> have increased from about 260 in 1996 to nearly 800 in 2004. [Attachment 2]

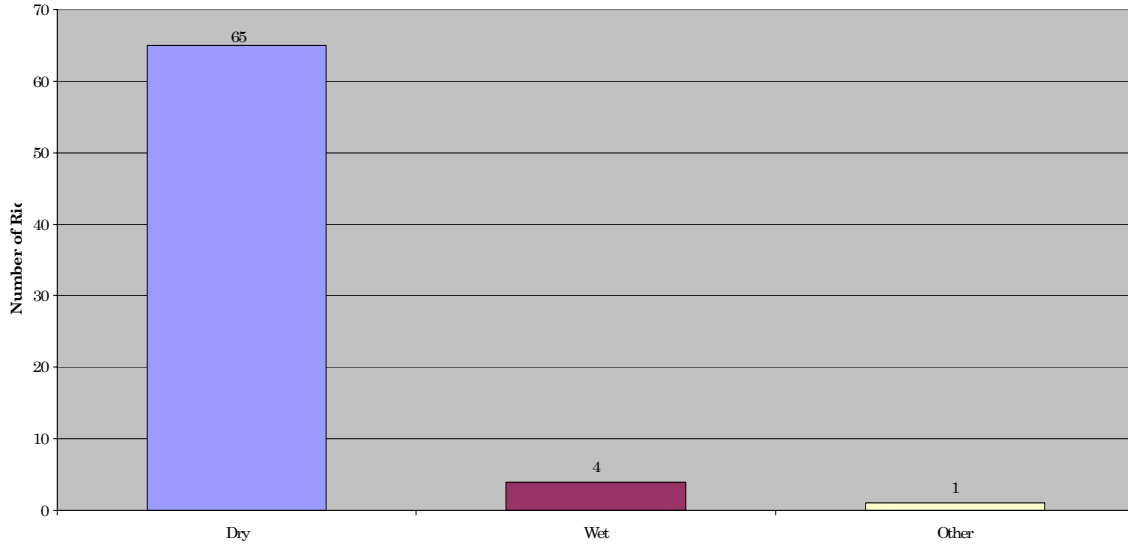


Source: Department of Health

<sup>3</sup> The Trauma Registry for the Department of Health identifies a serious motorcycle trauma injury by applying these criteria: (1) there is coding for injury from a motorcycle crash and (2) one of the following occurred: dead on arrival at the hospital, died in the hospital, transferred in or out of the hospital, was admitted to the hospital with a stay of more than 48 hours for adults or any stay for children 0-14, and/or the full trauma surgery team was activated.

3. A significant majority of motorcycle fatalities occur in dry conditions, in daylight hours, in the spring and summer. [Attachments 3-5]

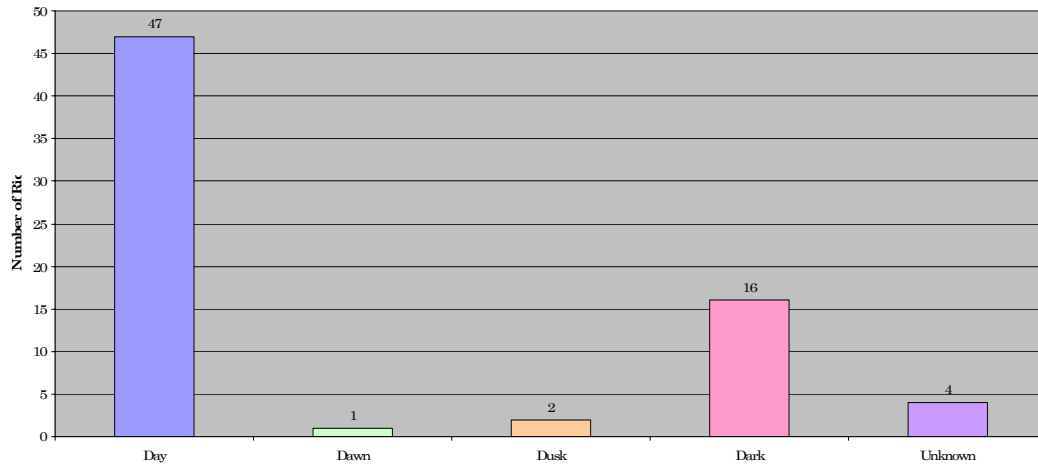
Attachment 3  
Motorcycle Fatalities and Weather Conditions-2004



Source: DOL 2004 Collision Reports  
Slide 10  
Revised 2/3/06

DOL Collision Report Total Motorcycle Fatalities in 2004 - 70

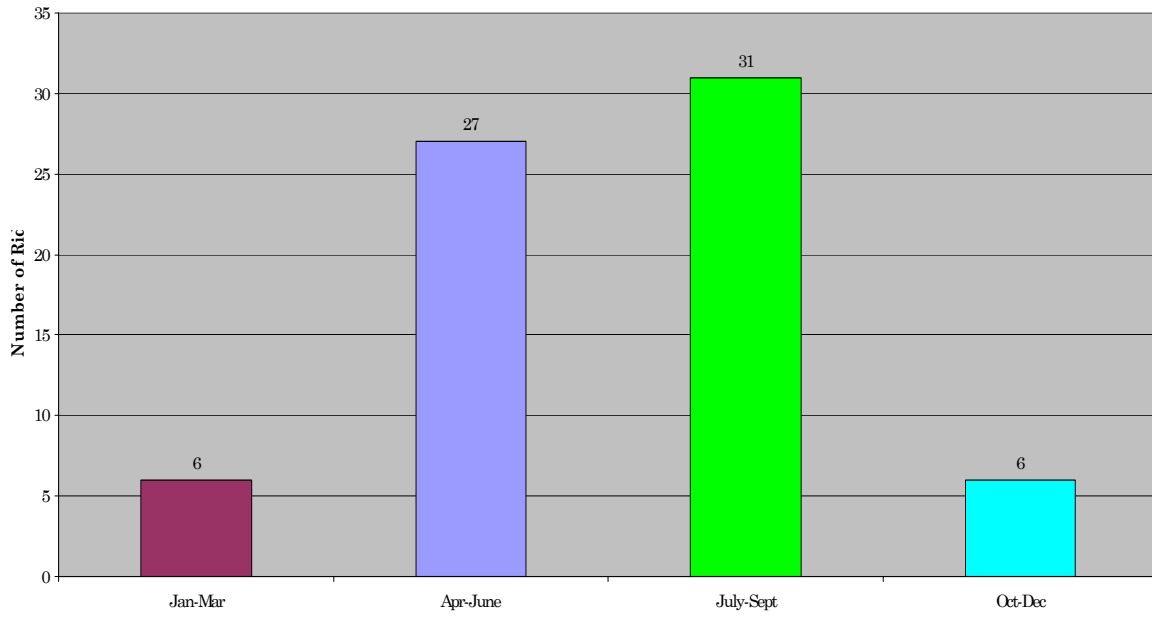
**Motorcycle Fatalities and Lighting Condition-2004**



Source: DOL 2004 Collision Reports  
Slide 11  
Revised 2/3/06

DOL Collision Report Total Motorcycle Fatalities in 2004 - 70

Attachment 5  
Months of Fatalities-2004



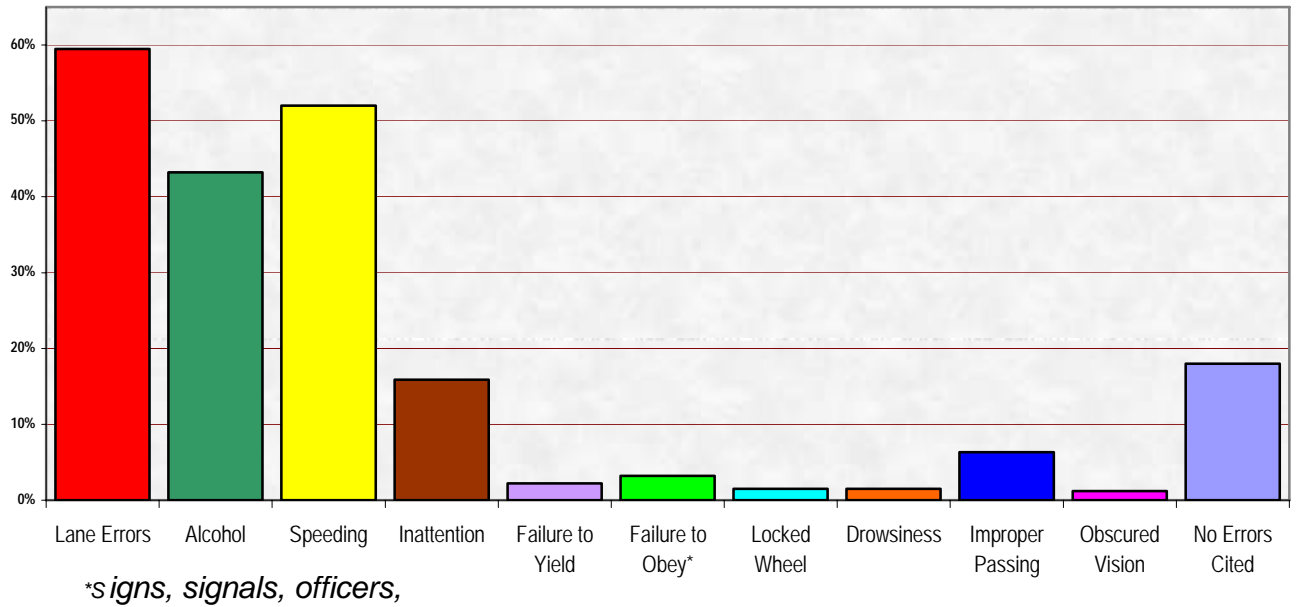
Source: DOL 2004 Collision Data



4. According to the reports compiled by on-scene officers, the four most common contributing factors in motorcycle fatalities are (in order): lane errors, speed, alcohol, and inattention. [Attachment 6]

Common Contributing Factors in Motorcycle Fatalities  
 Washington State, 1993-2002  
 Attachment 6

Source: FARS

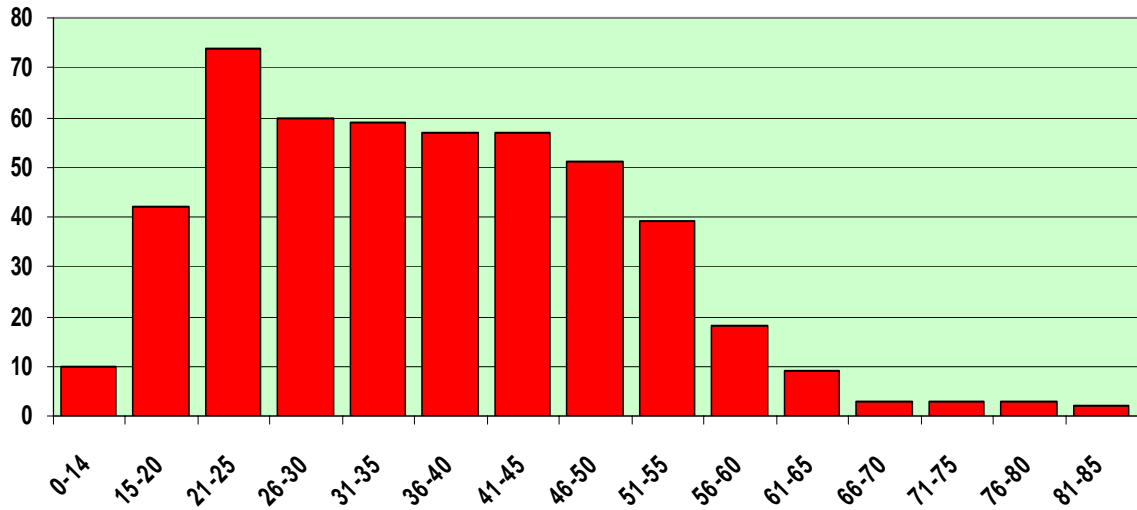


5. While many fatalities are young men, fatalities are distributed among all age groups.<sup>4</sup>  
[Attachment 7]

Attachment 7

**MOTORCYCLIST FATALITIES, 1993-2003**  
**Washington state, By Age Group (M/F 7:1)**

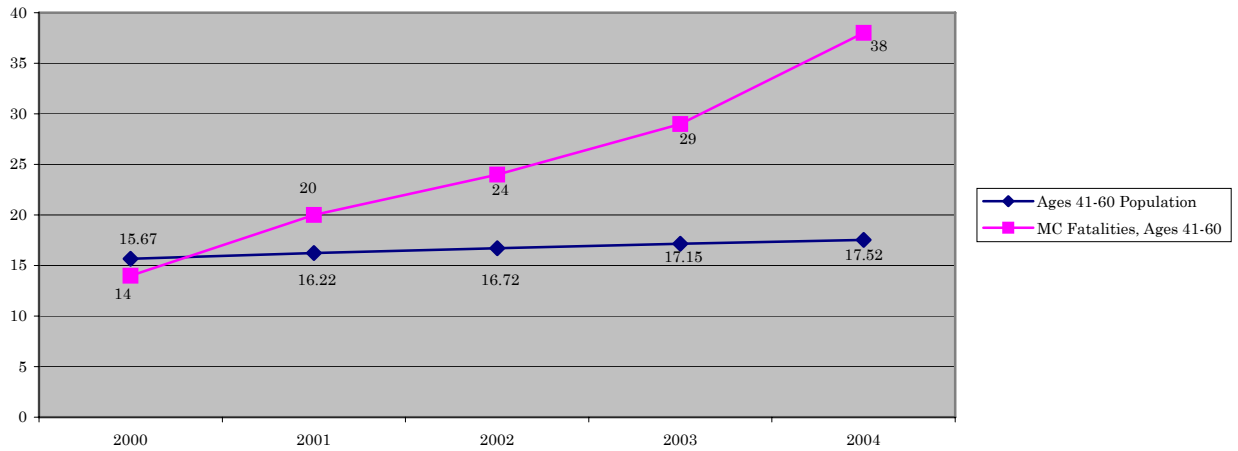
Source: FARS



<sup>4</sup> Most fatalities are men. In the last decade, the proportion of male to female fatalities was seven to one.

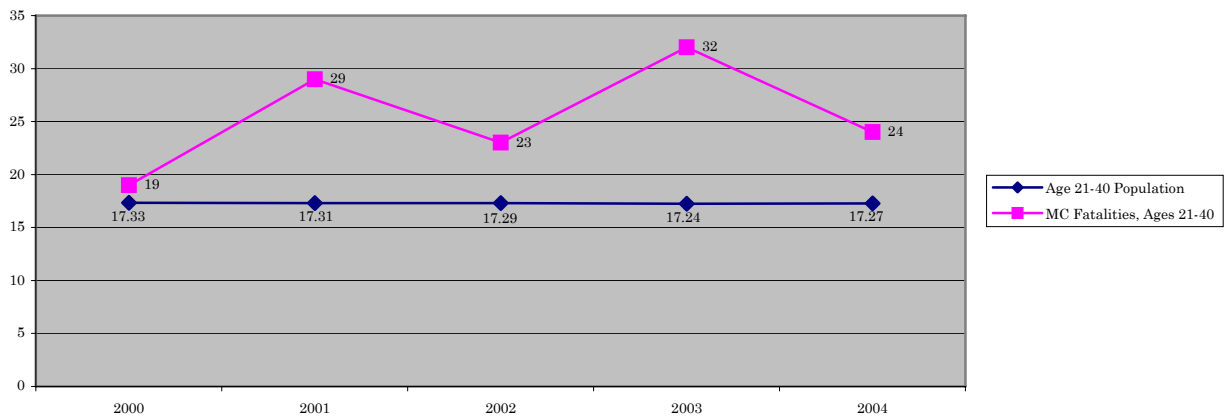
6. Fatalities for riders between the ages of 41 and 60 have increased two-and-a half times over the last five years, while the population of this age group has increased slightly over 10% for the same period. Annual fatalities for riders between the ages of 21 and 40 have varied during this time period, while the population cohort of ages 21-40 has actually declined slightly. [Attachments 8 and 9]

**Comparison of Washington Population of Age Group 41-60 Growth Rate vs. Motorcycle Fatalities for Ages 41-60 Growth Rate  
(Population 1=100,000 People)  
Attachment 8**



Source: FARS, OFM Forecasting Division Nov. 2005

**Comparison of Washington Population of Age Group 21-40 Growth Rate vs. Motorcycle Fatalities for Age Group 21-40 Growth Rate  
(Population 1=100,000)  
Attachment 9**

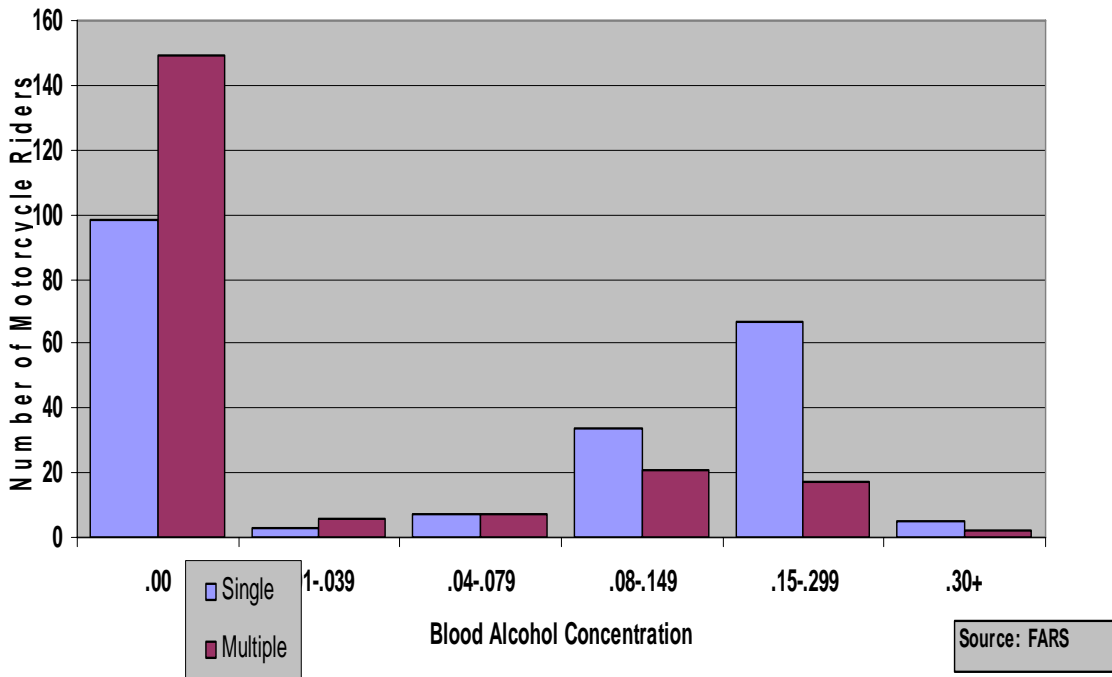


Source: FARS, OFM Forecasting Division Nov. 2005

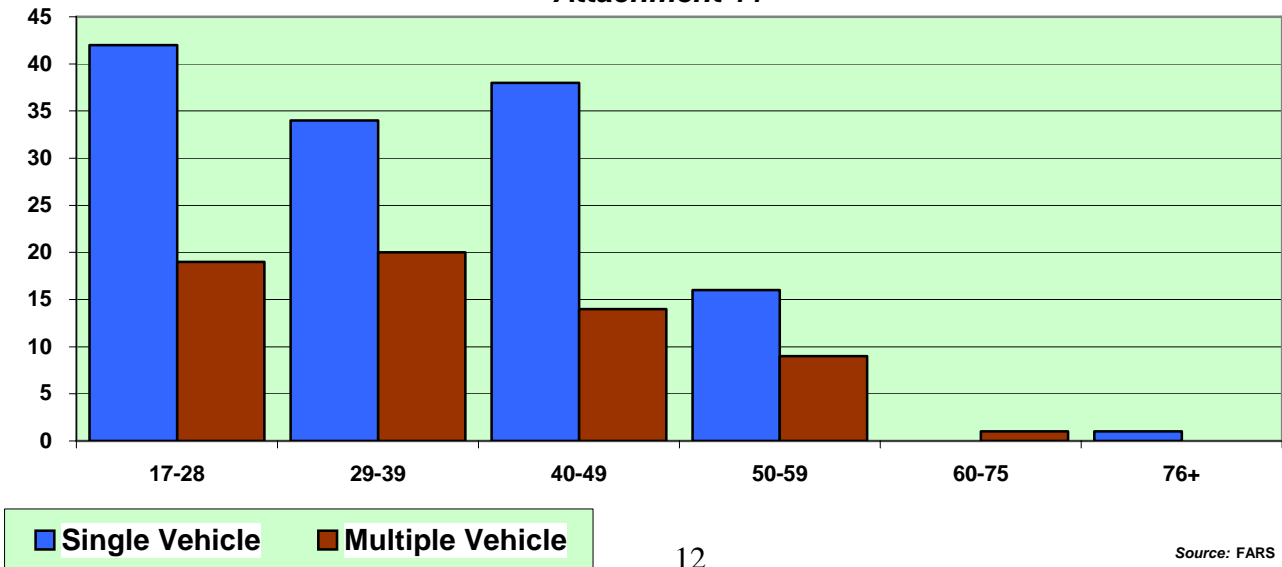
7. About half of fatal crashes from 1993 to 2003 were single vehicles (that is, there was no vehicle involved other than the motorcycle) and half were multi-vehicle.  
 [Attachment 10] When alcohol was involved, two-thirds of the fatal crashes were single vehicles occurrences (motorcycles only). (Attachment 11)

Attachment 10

**BAC of Motorcycle Riders  
 Single vs Multiple Vehicle Crash, 1993-2003**

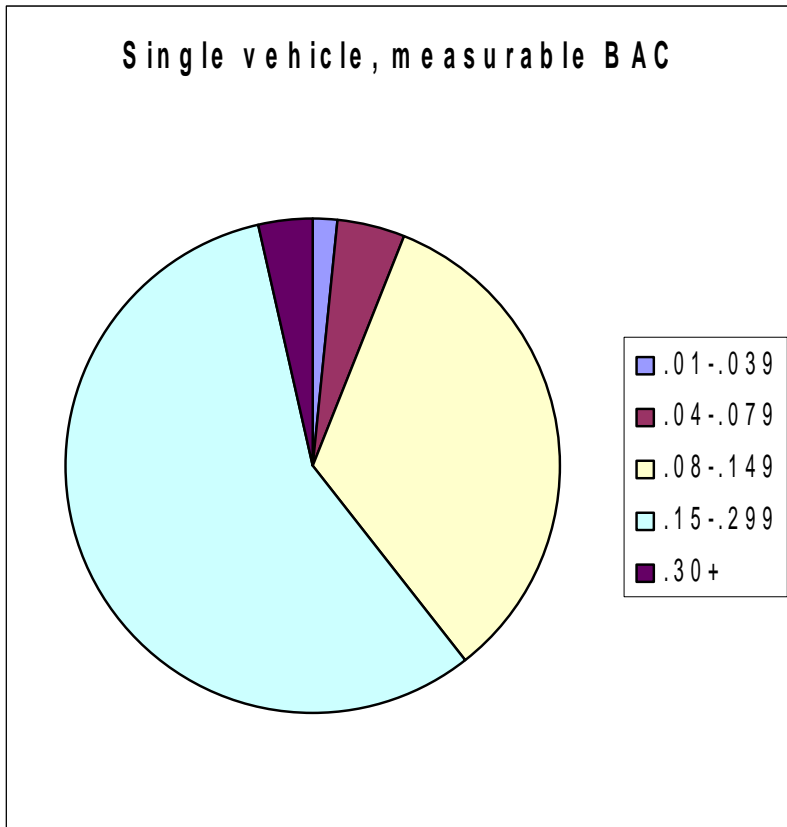


**Drinking Motorcycle Drivers in Fatal Crashes, 1993-2003  
 Washington state, By Age Group and Vehicle Involvement  
 Attachment 11**



8. From 1993-2003, the majority of riders in single-vehicle fatalities tested at a Blood Alcohol Concentration (BAC) in the range of .15 to .30. By most estimates, this represents the consumption of four to five drinks per hour. [Attachment 12]

Attachment 12

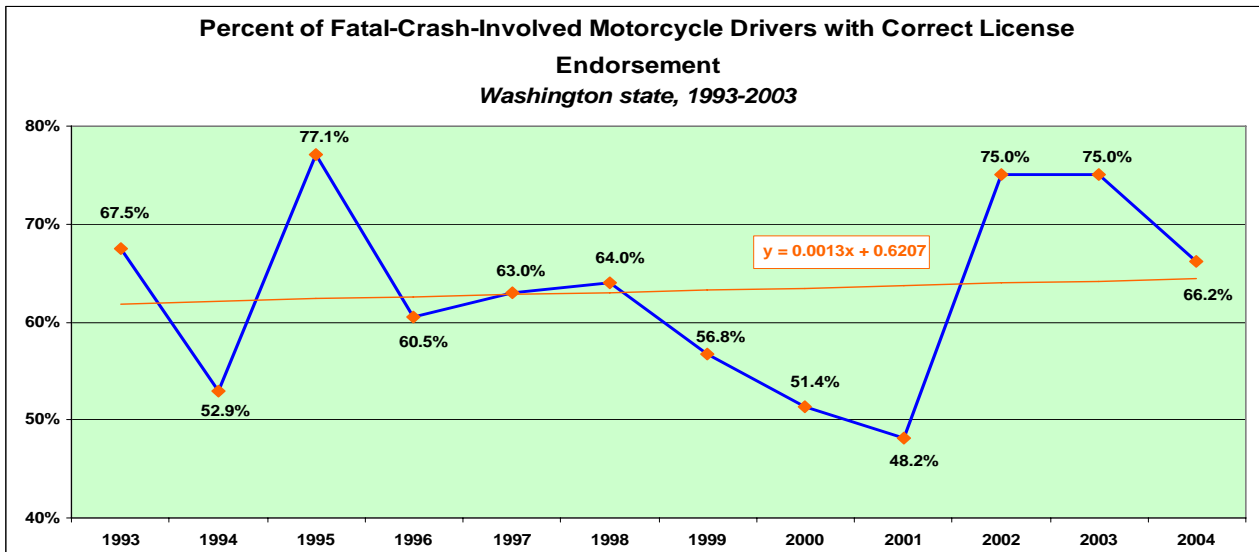


Source: FARS

9. One-third of fatalities from 1993 to 2004 were motorcyclists who did not have a valid motorcycle endorsement. [Attachment 13]

Attachment 13

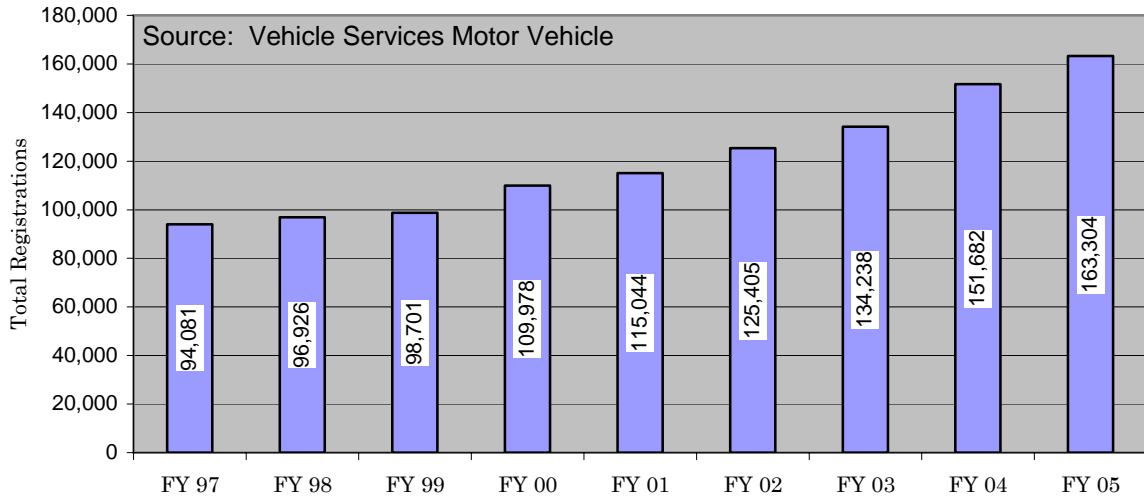
<b>Vehicle License Endorsement Compliance by Motorcycle Operators in Fatal Crashes, Washington state, By Year</b>											
ENDORSEMENT COMPLIANCE	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
no license	3	1	0	3	0	1	0	2	2	0	0
no license endorsement required	0	0	0	0	0	1	1	0	0	0	0
no valid license for this vehicle	10	15	8	12	10	16	15	16	27	13	15
valid license endorsement	27	18	27	23	17	32	21	19	27	39	45
unknown	0	0	1	0	0	0	1	0	1	1	0
<b>TOTAL</b>	<b>40</b>	<b>34</b>	<b>36</b>	<b>38</b>	<b>27</b>	<b>50</b>	<b>38</b>	<b>37</b>	<b>57</b>	<b>53</b>	<b>60</b>
<b>% Compliance</b>	<b>67.5%</b>	<b>52.9%</b>	<b>77.1%</b>	<b>60.5%</b>	<b>63.0%</b>	<b>64.0%</b>	<b>56.8%</b>	<b>51.4%</b>	<b>48.2%</b>	<b>75.0%</b>	<b>75.0%</b>



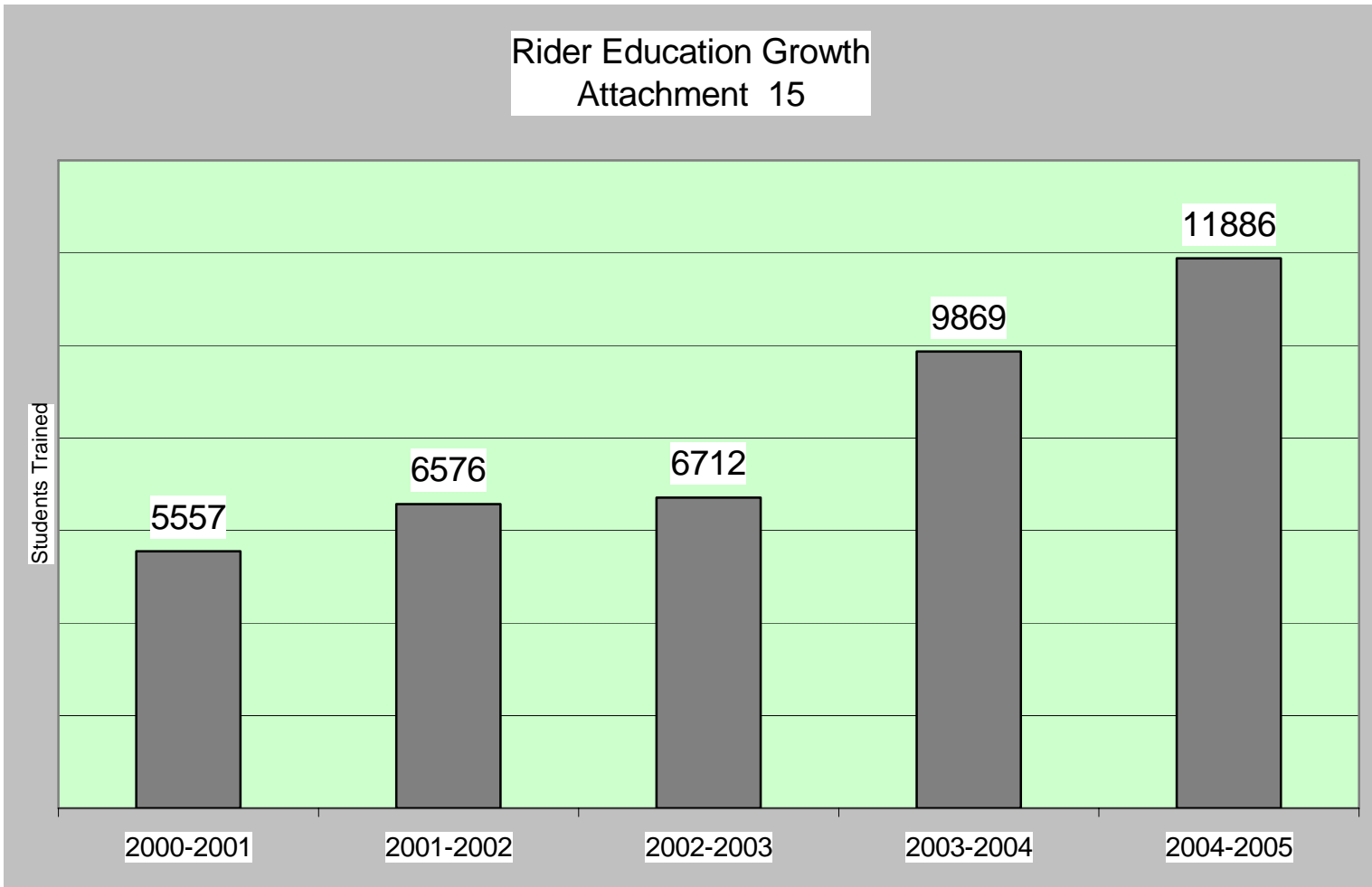
Source: FARS

10. Motorcycle registrations increased 74% between 1997 and 2005 (from 94,081 to 163,304). [Attachment 14]

Washington Motorcycle Registrations  
FY 1997 to 2005  
Attachment 14



11. Rider education enrollment has more than doubled in the last five fiscal years, from 5,557 in 2000-01 to 11,886 in 2004-05. [Attachment 15]



Source: DOL Motorcycle Safety Database



## Recommendations: Improve Rider Behavior and Skills

### *Training*

The Task Force concluded that the most important factors are within the control of the rider. Efforts to reduce fatalities and serious injuries should focus on rider skill and rider behavior. In 2004, 86% of the fatalities had not taken the state's training course. By increasing training opportunities and refining training curriculum, more riders will have the requisite skills to operate motorcycles safely and avoid collisions. The Task Force recommends that training be increased significantly over the next three years, from currently 12,000 students annually to at least 30,000 annually by FY 2010. The Task Force concluded that a significant number of people who fail to take the state-sponsored training are thought to be motivated by inconvenience and/or unawareness factors rather than financial factors.

- The Department of Licensing should conduct a top-to-bottom assessment of the rider training curriculum and revise as necessary, with the presumptive course being a shift to the safety training developed over three years by the State of Oregon. The Oregon program has an ability to adapt to local riding circumstances and data based causation factors, which the Washington program does not currently have: Washington is bound by the requirements of the Motorcycle Safety Foundation, which are more difficult to adjust. The costs of instructional materials (workbooks, etc.) for the Oregon program are about half the cost of instructional materials for the current Washington program.
- The assessment should identify and address disparities in the use of training facilities statewide and redistribute resources to reduce waiting times for potential students. DOL should set a statewide performance goal of no more than 30 days waiting time to receive training, everywhere in the state.
- The assessment should explicitly address the costs and benefits of the State directly providing the training (similar to the Oregon program) or continuing to provide training through external contractors, or some combination of direct and vendor-based training.
- The curriculum should change to provide a greater percentage of the training time to be spent in the field to optimize repetitive learning of riding skills in a physical setting.
- The Department should, as an ordinary part of its business, regularly conduct data-based reviews of course effectiveness and then adapt the management of the

course program based on those reviews. A consideration for future training programs is they should be receptive to an adaptive management approach.

- The field training should allow the option of riders using their own bikes in the Basic Riders Course.
- To help cover the costs of additional training, the students' course costs and the current subsidies should be adjusted and the annual motorcycle registration fee should be increased.<sup>5</sup>
- To encourage participation in the Experienced Rider Course, DOL should test different messages and class titles that better reflect the target students and their needs.
- Motorcycle awareness should be included in the Driver Training Schools curriculum, and in the Washington State Drivers Manual.

### ***Public Awareness Campaign***

The Washington Traffic Safety Commission exists to help reduce death and injury on our roadways. The Task Force reviewed some of the historical efforts of the Traffic Safety Commission, including the Click-It or Ticket and the Drive Hammered, Get Nailed campaigns. These efforts have resulted in increased motorist awareness and greater compliance with traffic safety laws. The Task Force also reviewed products of public safety campaigns in other states. The Task Force concluded that a major education and public awareness effort should be made to counteract motorcycle and automobile driver behavior that contributes to fatal crashes. To that end, the Task Force makes the following recommendations:

- The Washington Traffic Safety Commission should use its expertise to develop a public safety campaign, similar to other successful safety campaigns it has sponsored.
- The campaign should develop messages for and target three distinct audiences:
  - Motorcycle riders up to age 25
  - Motorcycle riders over the age of 40
  - Automobile drivers

Over time the Commission can adjust the target audience and messaging to reflect survey data trends.

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<sup>5</sup> See the Funding Recommendation in Exhibit 1.

- The campaign should target the top dangers identified by collision data, currently: (1) lane errors, (2) speed, (3) alcohol, and (4) inattention.
- Prevention of alcohol-related fatalities should focus on the cohort of those demonstrating .15 to .30 BAC, primarily through behavior modification in the motorcycle community. This modification may include voluntary changes in recreational activities to reduce the emphasis on alcohol consumption or even to eliminate it as an element of activities. Public education in the motorcycle community will be a primary tool.
- The campaign should develop and depend on partnerships with motorcycle organizations, motorcycle dealers, and the military.
- The campaign should be multi-dimensional and should employ and utilize different media for the different age groups, and it should target different messages to the different age cohorts.
- The campaign should be highly visible in highway signage, television and radio, and Internet postings.
- The campaign should target the dangers of motorcycle riding under the influence through collaborative partnerships with motorcycle rider organizations.
- The campaign should be operated in conjunction with an enforcement effort undertaken by the Washington State law enforcement agencies. This effort should also engage the State Liquor Control Board.

### ***Accountability and Enforcement***

Evidence from previous traffic safety campaigns suggests that accountability measures by law enforcement agencies help to reinforce the messages of the campaign. Two of the behaviors noted by the Task Force were the number of fatalities that involved high blood alcohol content and motorcyclists who did not have a valid motorcycle endorsement. The Task Force recommended that an enforcement effort should focus on these behaviors.

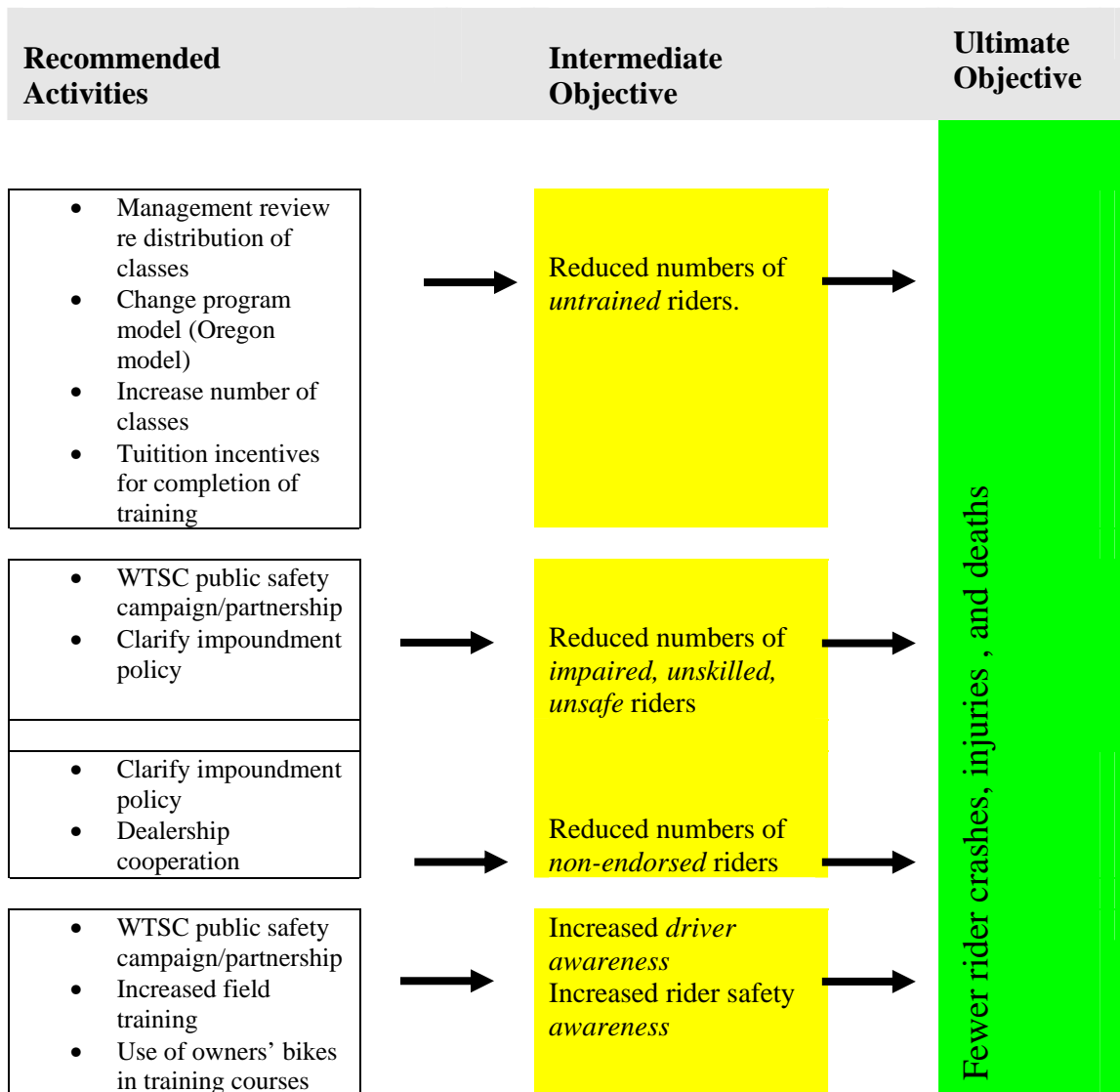
- The Department of Licensing, State Patrol, and Traffic Safety Commission should seek a formal opinion from the Office of the Attorney General as to whether or not law enforcement officers have the right to impound motorcycles when, after making a traffic stop, they find that the driver
  - Is driving under the influence of drugs or alcohol
  - Does not have a valid endorsement
  - Has a suspended or expired driver license

- If this authority currently exists, then the State Patrol and other law enforcement agencies should begin an enforcement campaign, in conjunction with the revised training program and public awareness campaign.
- If the Attorney General's Office does not believe that law enforcement officers have the authority to impound motorcycles under each of these conditions, then the state agencies should seek legislative authority to acquire it consistently for all motor vehicle types.
- Officers should take reasonable steps not to impound if possible (for example, releasing the bike to another licensed rider). But the presumptive action should be to impound the bikes of offenders.
- DOL should seek a partnership with motorcycle dealers to discourage the practice of allowing unendorsed purchasers to ride a newly purchased bike from their lots.
- DOL should seek legislation to include motorcycle operators in the requirement to show a current motorcycle endorsement for renewal of a motorcycle registration.
- DOL should identify the unendorsed motorcycle owners, and inform them of the law requiring a valid motorcycle endorsement.
- Motorcycle groups should encourage endorsement for participation in organized riding events.

## **Conclusion**

The Task Force believes that the most important factors involving motorcycles crashes are within the control of the rider. Efforts to reduce fatalities and serious injuries should focus on rider skill and behavior. A combination of increased training, greater public awareness, and enforcement targeting the primary risk factors herein should lead to a reduction of fatalities and serious injuries among motorcyclists.

If funds are provided by the Legislature in the spring of 2007, then the state agencies could begin taking the recommended actions at the outset of Fiscal Year 2008. Together the motorcycle community and state public safety agencies should study performance indicators to see if implementation of the recommendations of this report achieves the original objective. In partnership, these entities should adapt and adjust public safety activities and re-evaluate the changing motorcycle market, based on the data that emerges.



<p><i>Performance Metrics</i></p>		<ul style="list-style-type: none"> <li>• Average waiting period for training</li> <li>• Number of trained riders</li> <li>• Percentage of bikers who have awareness of the public safety campaign.</li> <li>• Number of fatalities involving inadequate endorsement or license</li> </ul>	<ul style="list-style-type: none"> <li>• Annual number of fatalities</li> <li>• Annual number of trauma cases (DOH)</li> <li>• Annual number of serious injuries (CHARS)</li> </ul>
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## Exhibit 1

### Funding Recommendations

The Task Force reviewed a range of options for raising the funding necessary to pay for the expanded training program and the public awareness campaign. The Task Force concluded that the necessary funding should be raised through a combination of these actions:

- 1) Commit \$1.0 million from the Motorcycle Safety Fund Reserve over four years to the expanded training program.
- 2) Reduce the average student subsidy by \$25, from \$110 to \$85.
- 3) Increase the new enrollment application fee by \$5 and divert the application fee from the Highway Safety Fund to the Motorcycle Safety Fund.
- 4) Increase the cost of the annual motorcycle registration fee by \$7, to be applied both to the expanded training program and the public awareness campaign.
- 5) Seek funds from the federal government of \$100,000 per year for four years to offset the costs of the public awareness campaign.

In combination, these actions would fund \$5.16 million in increased training costs and \$1.5 million toward a public awareness campaign.

The anticipated added costs and additional revenues are as follows:

Current per FY Budget	Total # of subsidized students	Training Subsidy Costs, with \$25 avg. reduction	Net Subsidy Costs	Program Admin Cost Increase	
8,800	\$ 968,000	NA	NA	NA	
FY 2008	14,800	\$ 1,258,000	\$ 290,000	\$ 195,000	
FY 2009	20,800	\$ 1,768,000	\$ 800,000	\$ 315,000	
FY 2010	26,800	\$ 2,278,000	\$ 1,310,000	\$ 470,000	
FY 2011	26,800	\$ 2,278,000	\$ 1,310,000	\$ 470,000	
Two Biennium Program Increase		54,000	\$ 7,582,000	\$ 3,710,000	\$ 1,450,000
Overall increase in training costs			\$ 5,160,000		
			\$ 1,500,000		
<b>Total additional costs</b>			<b>\$ 6,660,000</b>		
<b>New Revenue</b>					
Motorcycle Safety Fund Reserve			\$ 1,000,000		
Increase new endorsement application fee; divert to Motorcycle Safety Fund			\$ 540,000		
Federal grant for public awareness			\$ 400,000		
Increase motorcycle registration \$7/yr.			\$ 5,040,000		
<b>Total new revenues</b>			<b>\$ 6,980,000</b>		

## **Appendix A**

### **Motorcycle Rider Safety Task Force Membership**

Pat Barnes, Motorcycle Advisory Board  
Rich Bright, ABATE  
Eric Carlson, Gold Wing Road Riders Association  
Lynn Drake, Traffic Safety Commission  
John Dunn, Department of Transportation  
Vicki Gray, Washington Dealers Association  
Greg Gurske, Department of Licensing  
Karl Herzog, Office of the Governor  
Ian King, Washington Road Riders Association  
Elizabeth Luce, Director, Department of Licensing  
Becky Loomis, Department of Licensing [team leader]  
Meghan Rush, Columbia Motorcycle Training  
Carl Spurgeon, DOL Motorcycle Safety Program Manager  
Lieutenant Mike Turcott, Washington State Patrol  
Johnny Vallely, Christian Motorcycle Association  
Kathy Williams, Department of Health