

# IMPAIRED DRIVING

THE DANGER ON OHIO ROADS





## EXECUTIVE SUMMARY

The Ohio State Highway Patrol report, *Impaired Driving: The Danger on Ohio Roads* provides vital information regarding the impact of alcohol-impaired driving on the safety and economic well-being of Ohio citizens.

### *In Ohio...*

- One person is injured every 48 minutes and one is killed every 19 hours in an alcohol-related traffic crash (2001-2005).
- One in three traffic deaths are alcohol-related (2001-2005).
- One-third of alcohol-related crashes occur in just six large metropolitan counties (2001-2005).
- Alcohol-related fatalities have increased 26 percent (from 2001 to 2005).
- Impaired motorists drove an estimated 3.8 billion miles on Ohio roads, an average of 2 million miles per day (2001-2005).<sup>6</sup>
- Nearly 250,000 Ohio drivers were convicted of OVI; 44 percent were repeat offenders (2001-2005).<sup>8</sup>
- 33,000 habitual offenders (five or more OVI convictions) account for 12 percent of all OVI convictions in the state (1980-).<sup>8</sup>
- Impaired driving cost state and local economies a combined \$4 billion (2001-2005).<sup>9</sup>

### *Nationally...*

- Traffic crashes are the leading cause of death for the age group four through 34 in the United States.<sup>1</sup>
- Three in 10 Americans will be involved in an alcohol-related traffic crash.<sup>5</sup>
- At night, one in seven drivers is impaired.<sup>4</sup>
- Less than one percent of self-reported episodes of alcohol-impaired driving results in an arrest.<sup>2,3</sup>
- Traffic safety countermeasures can reduce alcohol-related traffic crashes by 10 to 24 percent.<sup>12,13</sup>



## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	1
INTRODUCTION.....	4
TRAFFIC CRASHES .....	6
TRAFFIC INJURIES .....	7
OVI CONVICTIONS.....	8
ECONOMIC COSTS.....	9
COMPREHENSIVE COSTS.....	10
LAW ENFORCEMENT COUNTERMEASURES.....	11
<i>OHIO METROPOLITAN TRAFFIC CRASH FORECASTING</i> .....	11
CONCLUSION.....	12
APPENDIX A: ALCOHOL-RELATED DATA BY COUNTY .....	13
APPENDIX B: OHIO METROPOLITAN TRAFFIC CRASH FORECASTS.....	21



## TABLE OF FIGURES

FIGURE 1. OHIO POPULATION, 2005.....	5
FIGURE 2. ALCOHOL-RELATED TRAFFIC CRASHES IN OHIO, 2001-2005.....	6
FIGURE 3. TRAFFIC CRASHES BY SEVERITY IN OHIO, 2001-2005 .....	6
FIGURE 4. ALCOHOL-RELATED TRAFFIC CRASHES BY COUNTY IN OHIO, 2001-2005.....	7
FIGURE 5. ALCOHOL-RELATED TRAFFIC CRASHES BY SEVERITY AND COUNTY SIZE, 2001-2005.....	7
FIGURE 6. ALCOHOL-RELATED TRAFFIC INJURIES IN OHIO, 2001-2005.....	8
FIGURE 7. ALCOHOL-RELATED TRAFFIC INJURIES BY COUNTY IN OHIO, 2001-2005.....	8
FIGURE 8. ALCOHOL-RELATED TRAFFIC INJURIES BY SEVERITY AND COUNTY SIZE, 2001-2005.....	8
FIGURE 9. OVI CONVICTIONS IN OHIO, 2001-2005 .....	9
FIGURE 10. OVI CONVICTIONS BY COUNTY IN OHIO, 2001-2005 .....	9
FIGURE 11. REPEAT OVI CONVICTIONS BY COUNTY SIZE, 2001-2005 .....	9
FIGURE 12. ECONOMIC COSTS OF ALCOHOL-RELATED TRAFFIC CRASHES IN OHIO, 2001-2005.....	10
FIGURE 13. COMPREHENSIVE COSTS OF ALCOHOL-RELATED TRAFFIC CRASHES IN OHIO, 2001-2005.....	10
FIGURE 14. ESTIMATED BENEFITS OF TRAFFIC SAFETY PROGRAMS IN OHIO.....	11



## INTRODUCTION

***“We are in the midst of a national epidemic,”*** declared former United States Transportation Secretary Norman Mineta in an April 2005 press release that highlighted the nation’s highway traffic crash problem. Each year, over 40,000 people are killed and 2.7 million people are injured in nearly six million traffic crashes across the country. Statistics from the Center for Disease Control and Prevention (CDC) indicate that motor vehicle traffic crashes are the leading cause of death for the age group four through 34 in the United States.<sup>1</sup> People in this age group are as likely to die in a traffic crash as by suicide and homicide combined.

Alcohol is a significant factor to the proliferation of traffic fatalities, contributing to nearly 40 percent of all roadway deaths. While over 1.4 million people are arrested annually for operating a motor vehicle while impaired,<sup>2</sup> this represents less than one percent of the 159 million self-reported episodes of alcohol-impaired driving among United States adults.<sup>3</sup> These undetected drinking and driving episodes can be costly, as recent research has found that drunk drivers are at least 13 times more likely to cause a fatal traffic crash than are sober drivers.<sup>4</sup> The National Highway Traffic Safety Administration (NHTSA) estimates that three in 10 Americans will be involved in an alcohol-related traffic crash at some time in their lives.<sup>5</sup>

The risks posed by impaired drivers are not only a national concern; they represent a significant danger to the citizens of Ohio. Over the last five years (2001-2005), drivers with a blood alcohol content (BAC) level of .08 or higher have traveled an estimated 3.8 billion miles on Ohio roads.<sup>6</sup> Each day, these impaired motorists threaten the well-being of citizens in the state. Research conducted by Harvard University economists found that at night from 8:00 p.m. to 5:00 a.m., one in seven motorists had been drinking, with the peak hours for

drinking and driving occurring between 1:00 a.m. and 3:00 a.m., when the rate increases to one in four drivers.<sup>7</sup> Traffic crash data in Ohio highlights the significance of these critical time frames. Forty percent of all alcohol-related crashes take place between 11:00 p.m. and 3:00 a.m., and the largest proportion of alcohol-related traffic deaths (21 percent) occur between 1:00 a.m. and 3:00 a.m. Over the last five years, 2,271 people were killed and 54,386 people were injured in alcohol-related traffic crashes on Ohio roads. ***On average, one person is injured every 48 minutes and one is killed every 19 hours in an alcohol-related traffic crash in Ohio.***

*Economists at Harvard University estimate that between 1:00 a.m. and 3:00 a.m., one in four drivers have been drinking.*

Each year, 50,000 Ohioans are convicted of operating a motor vehicle under the influence of alcohol or drugs (OVI). Motorists who are found guilty of drinking and driving and continue to operate a motor vehicle are of particular concern to state and local officials. These repeat offenders represent one in three convicted OVI drivers and account for 60 percent of all OVI convictions in the state.<sup>8</sup> The most dangerous drivers are considered “habitual” offenders. “Habitual” offenders are individuals who have received five or more OVI convictions in their lifetime. Currently, there are 33,000 such offenders in Ohio.<sup>9</sup> While these individuals represent only three percent of motorists found guilty of impaired driving, they account for 12 percent of all OVI convictions in the state.

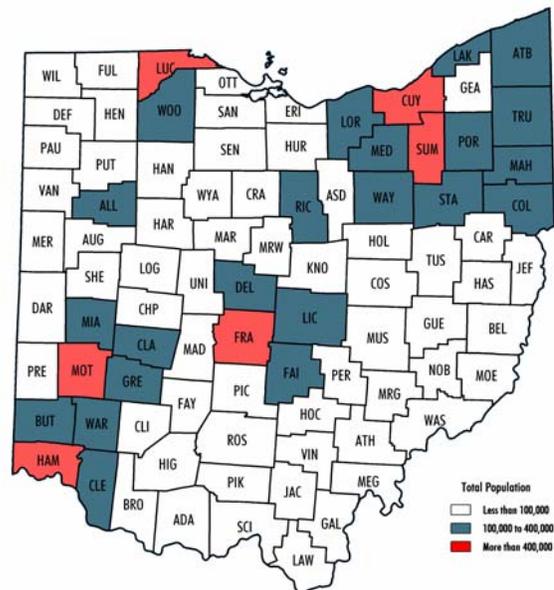
Clearly, impaired driving and alcohol-related crashes constitute a major threat to the safety and well-being of Ohio citizens. In addition to the societal toll caused by alcohol-related crashes, there are substantial monetary costs associated with impaired driving. The comprehensive costs associated with alcohol-related traffic crashes in Ohio are estimated at \$12.6 billion over the last five years.<sup>10</sup> Nearly \$4 billion directly impacts Ohio’s economy through lost wages and productivity costs, medical



expenses, administrative expenses, motor vehicle damage, and employers' uninsured costs. Studies indicate that the lifetime cost savings associated with preventing just one alcohol-related traffic fatality provides nearly \$3.86 million in benefits.<sup>11,12</sup> Research has found that increased law enforcement efforts, including low manpower sobriety checkpoints and targeted saturation patrols, can reduce the incidence of alcohol-related traffic crashes by 10 to 24 percent.<sup>13,14</sup> ***Well-designed state and local law enforcement partnerships focusing on the reduction of alcohol-related traffic crashes can lead to substantial cost savings for Ohio citizens.***

The following report takes an in-depth look at the impact of impaired driving in Ohio from 2001 to 2005. Each section of the report will focus on statewide trends, as well as provide county-level data that can be used for local planning purposes (for additional county-level data see Appendix A). Where applicable, county-level data is aggregated to look at broader differences across counties according to population counts. Based on 2005 United States Census projections, Ohio has six large, metropolitan counties (population of 400,000 or more), 22 medium-sized counties (population of 100,000 to 399,000), and 60 small-sized counties (fewer than 100,000 residents). See Figure 1.

FIGURE 1. OHIO POPULATION, 2005



One of the most important issues uncovered by this report is that not only do alcohol-related traffic crashes affect every county in the state; the severity of these crashes is on the rise. Over the last five years, alcohol-related traffic fatalities are up 26 percent. There is a clear need for law enforcement agencies, government officials, and local citizens to work together to reduce the incidence of impaired driving. Moreover, it is apparent that to make a significant, immediate impact on the alcohol-related crash problem additional resources must be focused in areas that have the greatest concentration of impaired drivers.

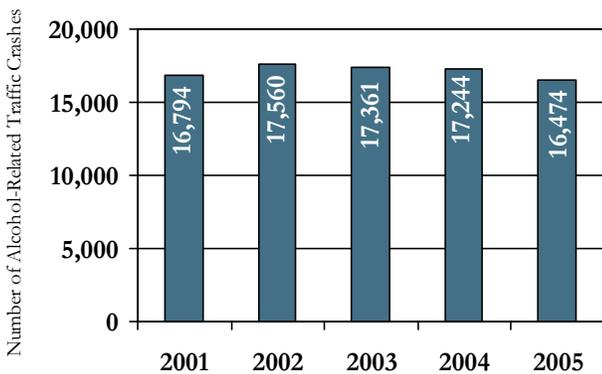
Ohio's six largest counties meet this description. While only 10 percent of the state's highway system is located in Cuyahoga, Franklin, Hamilton, Lucas, Montgomery, and Summit counties, they account for 42 percent of the population, 42 percent of licensed drivers, and 39 percent of vehicle miles traveled in the state. ***One in three alcohol-related traffic crashes in Ohio occurs in these six large metropolitan counties.*** The final section of this report discusses an innovative new initiative that uses traffic crash forecasting to target impaired motorists in Ohio metropolitan counties.



## TRAFFIC CRASHES

From 2001 to 2005, there have been 85,433 alcohol-related traffic crashes in Ohio. While the total number of crashes in Ohio has decreased 7.5 percent over the last five years, from 387,075 in 2001 to 358,127 in 2005, the number of traffic crashes involving alcohol has remained about the same (see Figure 2).

**FIGURE 2. ALCOHOL-RELATED TRAFFIC CRASHES IN OHIO, 2001-2005**



During this time period, alcohol was cited as a factor in 2,080 fatal crashes, 37,112 injury crashes, and 46,241 property damage only crashes (see Figure 3). Analyses of crash data establish a clear link between crash severity and alcohol use. While alcohol is cited as a factor in only 3.2 percent of crashes involving property damage alone, it accounts for 7.9 percent of injury crashes and 34.1 percent of fatal crashes. ***Traffic crashes involving alcohol are 11 times more fatal than non-alcohol related traffic crashes.***

**FIGURE 3. TRAFFIC CRASHES BY SEVERITY IN OHIO, 2001-2005**

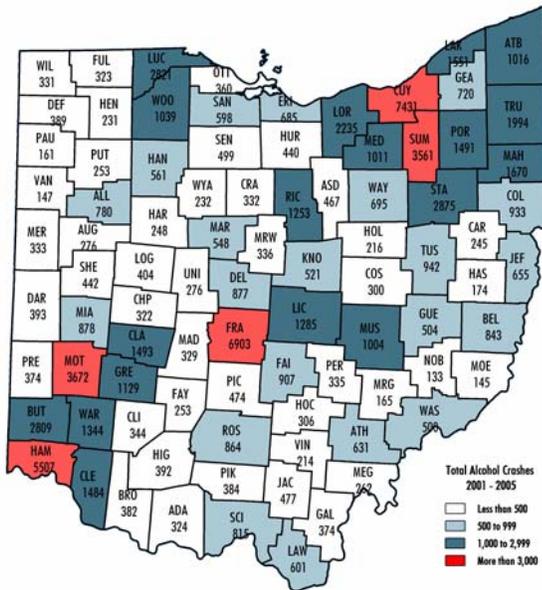
Category	Total	Alcohol-Related	% Alcohol
Traffic Crashes	1,905,600	85,433	4.5%
Fatal	6,099	2,080	34.1%
Injury	467,906	37,112	7.9%
PDO*	1,431,595	46,241	3.2%

\*Includes traffic crashes that are classified as unknown.

A significant number of alcohol-related traffic crashes occur in Ohio's six large metropolitan counties: Cuyahoga, Franklin, Hamilton, Lucas, Montgomery, and Summit. From 2001 to 2005, 29,895 of the total 85,433 alcohol-related traffic crashes in Ohio occurred in one of these areas (35 percent). This was over 5,000 more than the 24,789 alcohol-related crashes that occurred in the 60 smallest counties combined. Cuyahoga has led the state in alcohol-related traffic crashes (7,431), followed by Franklin (6,903) and Hamilton (5,507) counties. Forty-four Ohio counties recorded fewer than 500 total alcohol-related crashes over the last five years, or an average of 100 per county per year (see Figure 4).

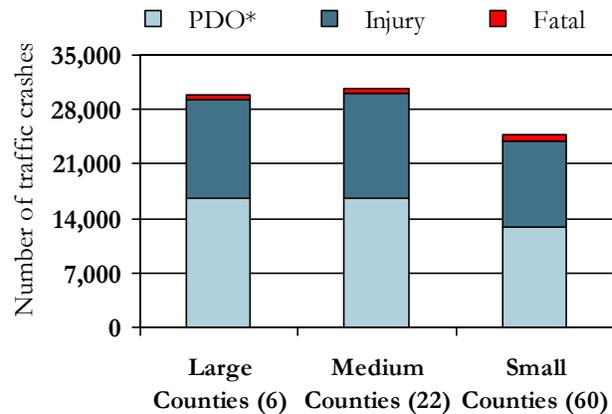


**FIGURE 4. ALCOHOL-RELATED TRAFFIC CRASHES BY COUNTY IN OHIO, 2001-2005**



One in four alcohol-related fatal crashes occurred in large metropolitan counties from 2001 to 2005. However, fatal alcohol crashes were only 1.9 percent of all alcohol-related crashes that occurred in these counties. This was slightly less than the 2.4 percent observed in medium-sized counties and 3.1 percent experienced in small counties (see Figure 5). Richland and Ashland counties had the lowest ratio of alcohol-related fatal crashes (1.2 percent and 1.3 percent respectively). Conversely, 11.2 percent of traffic crashes in Paulding County were fatal, nearly twice the rate of the next highest county, Morgan, at 6.1 percent.

**FIGURE 5. ALCOHOL-RELATED TRAFFIC CRASHES BY SEVERITY AND COUNTY SIZE, 2001-2005**



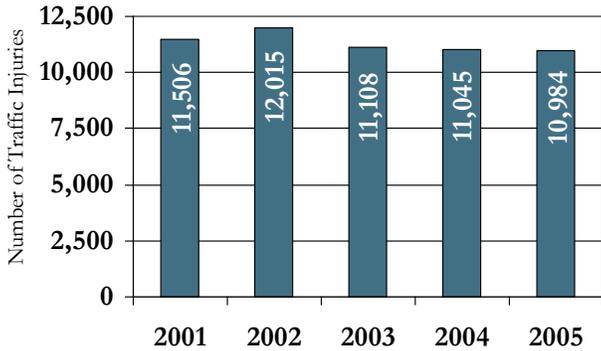
\*Includes crashes that were classified as unknown.

## TRAFFIC INJURIES

From 2001 to 2005, over 700,000 people were injured (including fatally injured) in traffic crashes on Ohio roads. Approximately 8.1 percent or 56,658 people who were injured were involved in an alcohol-related traffic crash. This was nearly twice the rate observed for traffic crashes overall, underscoring the increased severity of crashes involving alcohol. Overall, the number of traffic injuries has fallen 5.4 percent over the last five years, from 140,226 in 2001 to 132,658 in 2005. This is slightly higher than the 4.5 percent decrease in the number of traffic injuries involving alcohol over the same time period (see Figure 6). It is important to note that while the total number of traffic injuries has fallen 5.4 percent over the last five years, the number of people sustaining a fatal injury has fallen only 3.8 percent, from 1,379 in 2001 to 1,326 in 2005. *However, the number of alcohol-related fatalities has increased 26.4 percent over the five years, from 375 in 2001 to 474 in 2005.*

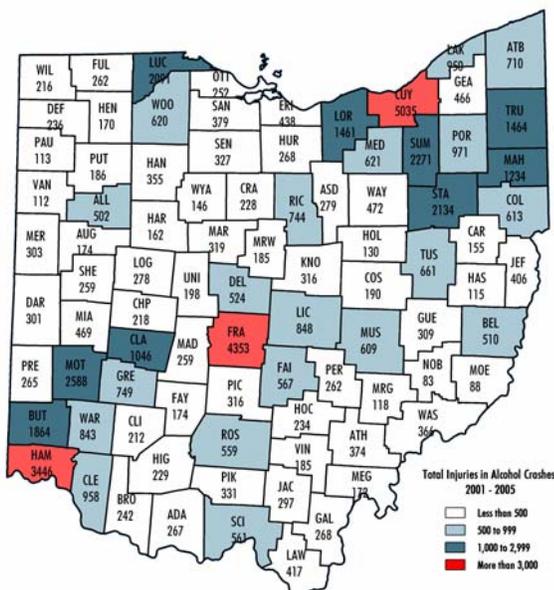


**FIGURE 6. ALCOHOL-RELATED TRAFFIC INJURIES IN OHIO, 2001-2005**



Cuyahoga County has led the state in alcohol-related traffic injuries, with 5,035 over the last five years. This was 15.7 percent more than the next highest county, Franklin, and 46.1 percent more than the third highest county, Hamilton. Overall, 12 Ohio counties recorded 1,000 or more alcohol-related traffic injuries over the last five years, with half of the counties located in the northeastern part of the state. In contrast, 57 of Ohio's 88 counties (64.7 percent) recorded fewer than 500 alcohol-related traffic injuries, with nearly 50 percent registering less than 250 over the time period. This was fewer than 50 per county per year (see Figure 7).

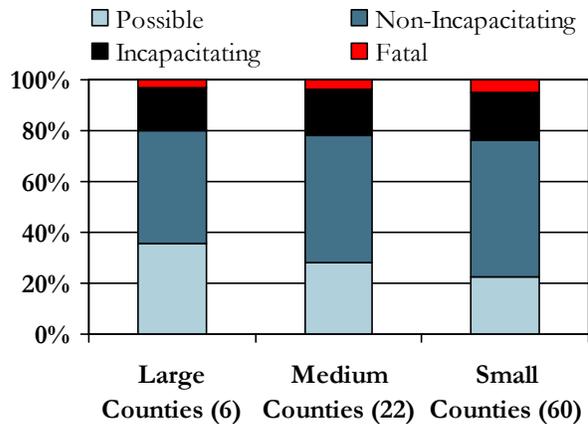
**FIGURE 7. ALCOHOL-RELATED TRAFFIC INJURIES BY COUNTY IN OHIO, 2001-2005**



As previously mentioned, traffic crashes involving alcohol tend to be more severe than non-alcohol related traffic crashes. Motorists involved in alcohol-related traffic crashes are nearly three times more likely to sustain a serious injury (fatal or incapacitating) than those involved in non-alcohol related crashes. Nearly one in five motorists that are injured in an alcohol-related traffic crash sustains a serious injury.

The proportion of serious alcohol-related traffic injuries is slightly more in small Ohio counties as compared to medium or large counties (see Figure 8). The highest ratio of serious alcohol-related traffic injuries were observed in Paulding and Coshocton counties (35.4 percent and 35.3 percent respectively), with motorists in Muskingum County, in general, suffering less severe alcohol-related traffic injuries (only 14.1 percent were considered serious).

**FIGURE 8. ALCOHOL-RELATED TRAFFIC INJURIES BY SEVERITY AND COUNTY SIZE, 2001-2005**



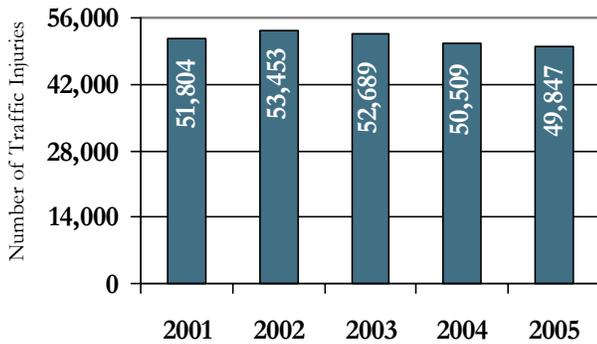
## OVI CONVICTIONS

From 2001 to 2005, there were 258,302 OVI convictions in Ohio. The number of OVI convictions has been decreasing over the last four years, from a high of 53,453 in 2002 to a low of 49,847 in 2005, a 6.7 percent decrease over the time period (see Figure 9). A large portion of the decrease in OVI convictions has occurred in



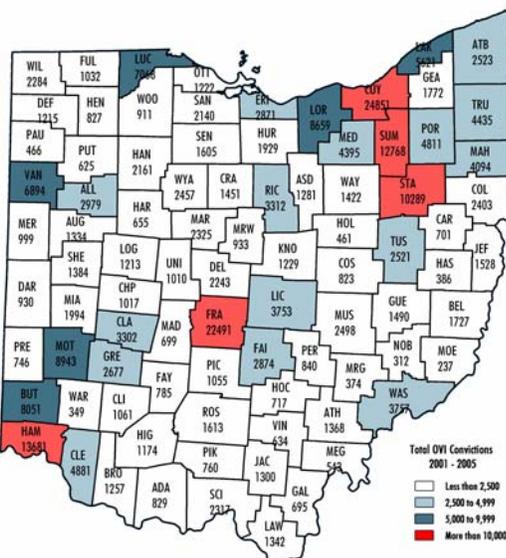
medium-sized counties, with 15 of the 22 counties reporting declines during the time period.

**FIGURE 9. OVI CONVICTIONS IN OHIO, 2001-2005**



Cuyahoga and Franklin counties have led the state in OVI convictions over the last five years (24,851 and 22,491 respectively). There were more OVI convictions in these two counties than the lowest 49 Ohio counties combined. From 2001 to 2005, 11 counties had 5,000 or more OVI convictions, six counties had 5,000 to 9,999 OVI convictions, 15 counties had 2,500 to 4,999 OVI convictions, and 62 counties had fewer than 2,500 OVI convictions over the last five years (see Figure 10).

**FIGURE 10. OVI CONVICTIONS BY COUNTY IN OHIO, 2001-2005**



Stark (-484), Cuyahoga (-474), Montgomery (-283), Trumbull (-215), and Summit (-193) counties recorded the largest absolute decrease in OVI convictions from 2001 compared to 2005. In contrast, Franklin, Lucas, and Wood counties had the largest increase in convictions during the time period (+908, +280, and +212 respectively).

Forty-four percent of Ohio drivers convicted of an OVI had at least one previous OVI conviction. In 15 Ohio counties, over half of drivers convicted of an OVI had at least one previous OVI conviction, led by Adams and Brown counties (58.0 percent and 56.4 percent respectively). **Moreover, no counties in the state had less than one in three convictions that involved repeat OVI offenders.** Medium-sized counties had the highest percent of repeat OVI offenders [(45.7 percent) see Figure 11].

**FIGURE 11. REPEAT OVI CONVICTIONS BY COUNTY SIZE, 2001-2005\***

Category	Total OVI Drivers	Repeat OVI Drivers	% Repeat OVI Drivers
State of Ohio	243,071	106,185	43.7%
Large Counties (6)	87,267	34,141	39.1%
Medium Counties (22)	88,540	40,463	45.7%
Small Counties (60)	73,800	31,581	36.2%

\*Does not include 6,536 total OVI drivers and 2,615 repeat OVI drivers with "unknown" county information.

## ECONOMIC COSTS

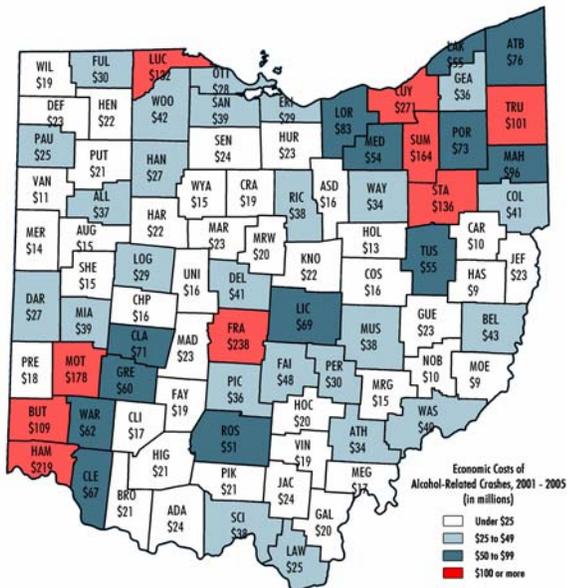
A common method used to illustrate the impact of alcohol-related traffic crashes on state and local economies is to calculate the economic costs associated with the events. The costs are a measure of the dollars spent and incomes not received due to alcohol-related accidents, injuries, and fatalities. Economic costs include lost wages and productivity costs, medical expenses,



administrative expenses, motor vehicle damage, and employers' uninsured costs.<sup>15</sup>

*Over the last five years, alcohol-related traffic crashes have cost state and local economies a combined \$4.0 billion.* Alcohol-related traffic crashes have cost nine Ohio counties over \$100 million during the last five years; accounting for one in three dollars in lost wages and expenses incurred due to alcohol-related traffic crashes in the state. The majority of costs were attributed to counties located in Northeastern and Southwestern Ohio.

**FIGURE 12. ECONOMIC COSTS OF ALCOHOL-RELATED TRAFFIC CRASHES IN OHIO, 2001-2005**



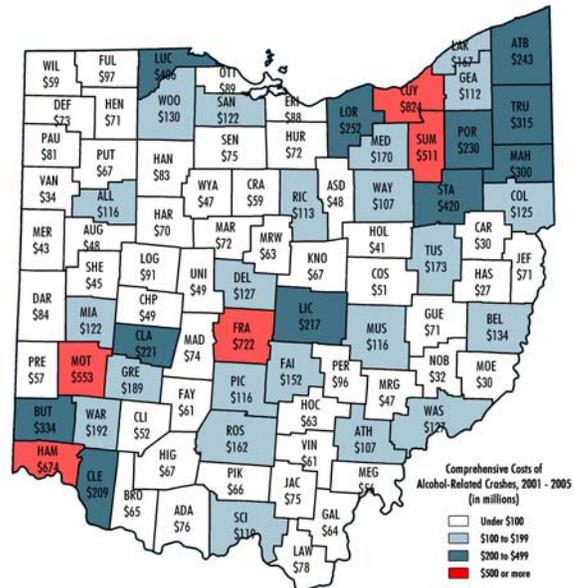
## COMPREHENSIVE COSTS

Although economic costs are a useful method to understand the direct monetary loss to state and local communities from past alcohol-related traffic crashes, comprehensive costs include the additional value of a person's natural desire to live longer and to protect the quality of one's life. The concept of comprehensive costs provides a better measure of the future benefits of alcohol-related traffic safety measures because estimates are based on

what people will actually pay to reduce their safety and health risks.<sup>16</sup> Often referred to as the "willingness to pay," the concept originally proposed by the United States Federal Highway Safety Administration, comprehensive costs have become the standard in assigning value to traffic safety programs.<sup>17</sup>

From 2001 to 2005, the comprehensive costs associated with alcohol-related traffic crashes in Ohio are estimated at \$12.6 billion, with the six large metropolitan counties accounting for 29 percent of the total costs. Overall, the comprehensive costs of alcohol-related traffic crashes topped \$100 million in 38 Ohio counties, with five counties exceeding \$500 million over the five-year period.

**FIGURE 13. COMPREHENSIVE COSTS OF ALCOHOL-RELATED TRAFFIC CRASHES IN OHIO, 2001-2005**



Researchers estimate that the comprehensive cost savings of preventing just one alcohol-related traffic fatality is nearly \$3.86 million.<sup>18</sup> This information can be used to demonstrate the potential benefits of focusing law enforcement efforts on reducing alcohol-related fatalities, particularly in Ohio's largest counties.



For example, the potential impact of a sustained effort to reduce alcohol-related traffic fatalities by 20 percent in Ohio, a goal similar to the one set forth by the 2004 Governor’s Task Force on Impaired Driving,<sup>19</sup> would lead to an estimated \$351 million in benefits each year (see Figure 14). The majority of these reductions could occur if law enforcement efforts were focused in large metropolitan counties, where one in four alcohol-related traffic deaths occur. The potential benefits realized in these six counties alone would exceed \$100 million.

**FIGURE 14. ESTIMATED BENEFITS OF TRAFFIC SAFETY PROGRAMS IN OHIO**

<b>Comprehensive Costs of Alcohol-Related Traffic Fatalities</b>	
454 alcohol-related traffic fatalities per year	
x \$3.86 million per traffic fatality	
<b>\$1.75 billion in total comprehensive costs</b>	
<b>20% Reduction in Alcohol-Related Traffic Fatalities</b>	
-91 fewer alcohol-related traffic fatalities	
x \$3.86 million per traffic fatality	
<b>- \$351 million in comprehensive costs</b>	

## LAW ENFORCEMENT COUNTERMEASURES

Two common traffic safety countermeasures used by law enforcement officials to deter motorists from drinking and driving are sobriety checkpoints and saturations patrols. Numerous research studies have shown that these targeted operations can have a significant deterrent effect, particularly when used in conjunction with strong public information and education campaigns.<sup>20</sup> A 1991 review found that such comprehensive programs can reduce alcohol-related crashes by 10 to 30 percent.<sup>21</sup> Similarly, one analysis that combined findings across a number of studies found that sobriety checkpoints can reduce impaired driving by as much as 22 percent.<sup>22</sup> While comprehensive programs, and particularly sobriety checkpoints, have proven to be effective, these countermeasures often require

additional funding and a substantial commitment of resources. To better allocate resources, the Ohio State Highway Patrol recently introduced a program that targets high crash roadways in major metropolitan counties. The “metro initiative” is considered a model for the future deployment of officers to metropolitan Interstates with the largest concentration of impaired drivers.

## OHIO METROPOLITAN TRAFFIC CRASH FORECASTING

In 2006, the Ohio State Highway Patrol partnered with the Ohio State University Statistical Consulting Service to develop a model that could predict when and where future traffic crashes would occur on specific routes in the major metropolitan counties. Results from “Crash Forecasting Model for Select Ohio Metro Roadways” provide a detailed analysis of traffic crashes on the following metropolitan roadways:

- Cleveland Area: I-271, I-480, I-71, I-77, I-90, and I-490
- Cincinnati Area: I-275, I-75, I-71, and I-74
- Columbus Area: I-270
- Dayton Area: I-675
- Toledo Area: I-280 and I-475.<sup>23</sup>

While the Crash Forecasting Model confirmed previously known information about alcohol-related traffic crashes (e.g. the number of crashes is very high between 2:00 a.m. and 3:00 a.m. on Saturdays and Sundays), it also provides new insights into crash-causing traffic patterns. This information is invaluable when deciding where to dispatch law enforcement officers. The researchers found that while there are consistencies in crash patterns across each metropolitan area, data analyses uncovered five distinct time groups for crashes. For example, crashes that occur from Monday to Thursday are associated with different crash configurations than crashes on Fridays, Saturdays or Sundays, holidays, and long holiday weekends. It is important for law enforcement officials to



recognize these differences and change operations accordingly.

The Ohio State Highway Patrol is using the new forecast information in a three-month pilot project that directs federal overtime money to combat serious traffic crashes in metropolitan areas. Results of the study will help guide the future deployment of officers that are targeting crash causing behaviors, in particular alcohol and speed violators. Appendix B provides crash forecasts for select roadways in large metropolitan counties.

## CONCLUSION

Impaired driving is a dangerous behavior that has a significant impact on the number of deaths and injuries on Ohio roadways. Researchers estimate that impaired drivers travel over two million miles each day on Ohio roads. While law enforcement has been diligent in addressing the issue, impaired driving remains a persistent problem. Crash statistics show that the number of alcohol-related fatal injuries has increased 26 percent in Ohio from 2001 to 2005.

Data analyses establish a clear link between crash severity and alcohol use. While alcohol is cited as a factor in three percent of property damage crashes, it accounts for eight percent of injury crashes and 34 percent of fatal crashes. In fact, traffic crashes involving alcohol are 11 times more fatal than non-alcohol related traffic crashes.

The costs of alcohol-related traffic crashes are substantial, with state and local Ohio economies losing an estimated \$4 billion from 2001 to 2005. Twenty-nine percent of these costs are associated with Ohio's large metropolitan counties.

Nearly 250,000 Ohio drivers have been convicted of OVI over the last five years. Repeat offenders are of particular concern as 44 percent of convicted OVI drivers were

previously found guilty of OVI. No county in the state has less than one in three convictions involving repeat OVI offenders. From 2001 to 2005, OVI convictions in Ohio have decreased seven percent.

While every county in the state experiences the impact of alcohol-impaired driving, one-third of all alcohol-related crashes occur in one of six large metropolitan counties: Cuyahoga, Franklin, Hamilton, Lucas, Montgomery, and Summit. The development of crash forecasting models for major highways in these areas will focus law enforcement efforts on the most dangerous roads. Concentrating traffic safety countermeasures will provide a significant and immediate impact on Ohio's alcohol crash problem. Researchers estimate that alcohol-related traffic crashes can be reduced by as much as 30 percent through effective enforcement and education.



## **APPENDIX A**

### **ALCOHOL-RELATED DATA BY COUNTY**



TABLE A1. TOTAL AND ALCOHOL-RELATED TRAFFIC CRASHES IN OHIO, 2001-2005

County	All Crashes							Alcohol-Related Crashes						
	2001	2002	2003	2004	2005	Total 2001-2005	% Change 2001-2005	2001	2002	2003	2004	2005	Total 2001-2005	% Change 2001-2005
Adams	1,082	1,104	1,160	1,094	973	5,413	-10%	71	72	57	64	60	324	-15%
Allen	3,957	4,279	4,489	4,328	4,068	21,121	3%	135	161	159	183	142	780	5%
Ashland	1,805	2,010	1,946	1,850	1,716	9,327	-5%	100	110	80	96	81	467	-19%
Ashtabula	3,310	3,394	3,507	3,316	3,086	16,613	-7%	225	203	196	192	200	1,016	-11%
Athens	2,011	1,946	1,955	1,739	1,544	9,195	-23%	128	137	122	124	120	631	-6%
Auglaize	1,267	1,268	1,411	1,295	1,248	6,489	-1%	59	49	60	64	44	276	-25%
Belmont	2,152	2,107	2,289	2,088	2,023	10,659	-6%	173	153	187	165	165	843	-5%
Brown	1,341	1,418	1,478	1,424	1,243	6,904	-7%	74	82	80	83	63	382	-15%
Butler	10,354	10,655	11,200	10,636	10,126	52,971	-2%	547	552	601	574	535	2,809	-2%
Carroll	897	967	1,040	815	660	4,379	-26%	41	57	57	50	40	245	-2%
Champaign	985	1,052	991	949	941	4,918	-4%	54	68	69	69	62	322	15%
Clark	4,670	4,509	4,578	4,393	4,049	22,199	-13%	280	308	296	331	278	1,493	-1%
Clemont	5,991	6,191	6,664	6,112	5,744	30,702	-4%	273	309	298	305	299	1,484	10%
Clinton	1,717	1,658	1,626	1,599	1,612	8,212	-6%	77	58	61	65	83	344	8%
Columbiana	2,800	3,098	3,090	3,007	2,779	14,774	-1%	174	212	184	206	157	933	-10%
Coshocton	1,532	1,628	1,586	1,426	1,100	7,272	-28%	66	59	64	50	61	300	-8%
Crawford	1,423	1,439	1,432	1,368	1,346	7,008	-5%	66	87	62	55	62	332	-6%
Cuyahoga	41,538	40,299	41,314	40,147	37,039	200,337	-11%	1,579	1,511	1,534	1,476	1,331	7,431	-16%
Darke	1,491	1,479	1,544	1,510	1,456	7,480	-2%	56	81	99	58	99	393	77%
Defiance	1,701	1,688	1,640	1,570	1,540	8,139	-9%	82	82	71	74	80	389	-2%
Delaware	3,694	3,733	3,891	4,082	4,019	19,419	9%	174	170	172	180	181	877	4%
Erie	3,069	2,891	3,031	3,000	2,829	14,820	-8%	171	124	128	127	135	685	-21%
Fairfield	3,922	3,775	4,072	4,136	3,618	19,523	-8%	169	176	170	214	178	907	5%
Fayette	1,098	1,180	1,208	1,170	1,012	5,668	-8%	43	58	49	54	49	253	14%
Franklin	40,397	39,012	37,819	37,475	36,493	191,196	-10%	1,249	1,404	1,428	1,435	1,387	6,903	11%
Fulton	1,244	1,294	1,219	1,197	1,220	6,174	-2%	81	66	68	57	51	323	-37%
Gallia	1,386	1,404	1,288	1,171	1,104	6,353	-20%	82	72	88	63	69	374	-16%
Geauga	2,442	2,602	2,706	2,773	2,569	13,092	5%	134	146	158	147	135	720	1%
Greene	4,559	4,708	4,828	4,482	4,252	22,829	-7%	203	205	232	224	265	1,129	31%
Guernsey	1,701	1,923	1,948	1,915	1,665	9,152	-2%	95	106	106	98	99	504	4%
Hamilton	38,137	38,054	39,240	37,384	34,777	187,592	-9%	1,067	1,110	1,184	1,079	1,067	5,507	0%
Hancock	2,713	2,847	3,021	3,062	2,775	14,418	2%	112	94	124	119	112	561	0%
Hardin	889	868	989	896	870	4,512	-2%	45	49	54	41	59	248	31%
Harrison	571	566	604	558	470	2,769	-18%	31	36	33	40	34	174	10%
Henry	833	906	895	942	845	4,421	1%	54	43	36	60	38	231	-30%
Highland	1,635	1,507	1,544	1,620	1,353	7,659	-17%	68	77	82	85	80	392	18%
Hocking	1,058	968	961	903	819	4,709	-23%	47	74	62	62	61	306	30%
Holmes	1,182	1,208	1,318	1,324	1,250	6,282	6%	46	38	44	45	43	216	-7%
Huron	1,622	1,814	1,864	1,744	1,597	8,641	-2%	71	97	95	90	87	440	23%
Jackson	1,518	1,574	1,527	1,407	1,278	7,304	-16%	80	120	97	91	89	477	11%
Jefferson	1,991	2,149	2,172	2,007	2,147	10,466	8%	131	138	135	115	136	655	4%
Knox	2,297	2,184	2,203	2,284	2,117	11,085	-8%	104	92	117	109	99	521	-5%
Lake	6,883	6,939	7,202	6,700	6,417	34,141	-7%	329	312	309	300	301	1,551	-9%
Lawrence	1,957	1,858	1,656	1,618	1,605	8,694	-18%	122	135	102	131	111	601	-9%
Licking	4,865	4,656	4,522	4,940	4,906	23,889	1%	262	280	253	253	237	1,285	-10%
Logan	1,926	1,832	1,671	1,851	1,845	9,125	-4%	85	70	86	70	66	404	15%
Lorain	7,911	8,043	8,352	8,478	7,700	40,484	-3%	468	464	441	472	390	2,235	-17%
Lucas	20,291	18,283	18,893	18,074	16,758	92,299	-17%	579	553	550	570	569	2,821	-2%
Madison	1,183	1,066	1,302	1,194	1,175	5,920	-1%	58	75	54	72	70	329	21%
Mahoning	8,052	8,008	7,970	8,018	7,832	39,880	-3%	324	367	300	327	352	1,670	9%
Marion	2,373	2,365	2,292	2,138	2,108	11,276	-11%	105	131	120	96	96	548	-9%
Medina	4,012	4,249	4,403	4,341	4,089	21,094	2%	187	204	213	226	181	1,011	-3%
Meigs	787	748	784	756	647	3,722	-18%	49	59	52	60	42	262	-14%
Mercer	1,041	1,025	1,088	1,015	988	5,157	-5%	51	75	80	66	61	333	20%
Miami	3,312	3,367	3,283	3,297	3,010	16,269	-9%	161	189	188	178	162	878	1%
Monroe	287	327	329	295	317	1,555	10%	31	34	26	31	23	145	-26%
Montgomery	15,728	15,448	15,502	15,034	13,957	75,669	-11%	748	773	730	699	722	3,672	-3%
Morgan	570	547	512	545	462	2,636	-19%	30	36	34	36	29	165	-3%
Morrow	1,189	1,204	1,269	1,213	1,256	6,131	6%	64	73	77	63	59	336	-8%
Muskingum	3,880	3,767	4,144	4,005	3,544	19,340	-9%	196	212	232	192	172	1,004	-12%
Noble	658	518	523	456	470	2,625	-29%	26	21	31	29	26	133	0%
Ottawa	1,152	1,226	1,198	1,201	1,144	5,921	-1%	72	59	94	72	63	360	-13%
Paulding	555	558	624	559	504	2,800	-9%	25	38	40	32	26	161	4%
Perry	1,111	1,054	935	957	825	4,882	-26%	70	71	56	68	70	335	0%
Pickaway	1,787	1,885	1,995	1,909	1,674	9,250	-6%	80	100	91	99	104	474	30%
Pike	957	904	868	922	804	4,455	-16%	80	68	79	87	70	384	-13%
Portage	4,705	4,977	4,786	4,814	4,543	23,825	-3%	298	317	283	324	269	1,491	-10%
Preble	1,368	1,275	1,276	1,199	1,291	6,409	-6%	76	73	62	55	108	374	42%
Pulnam	747	741	715	716	712	3,631	-5%	48	60	56	49	40	253	-17%
Richland	4,880	5,151	5,227	5,179	5,047	25,484	3%	263	272	259	234	225	1,253	-14%
Ross	3,235	3,130	3,140	3,087	2,907	15,499	-10%	200	164	169	171	160	864	-20%
Sandusky	2,277	2,302	2,350	2,294	2,080	11,303	-9%	128	117	126	111	116	598	-9%
Scioto	3,135	2,783	2,957	2,770	2,539	14,184	-19%	174	176	148	162	155	815	-11%
Seneca	2,042	2,099	1,991	2,031	1,824	9,987	-11%	89	116	91	110	93	499	4%
Shelby	1,754	1,817	1,924	1,891	1,811	9,197	3%	84	104	84	80	90	442	7%
Stark	11,772	13,339	13,605	13,355	12,308	64,379	5%	499	566	581	639	590	2,875	18%
Summit	19,648	19,867	19,689	18,890	17,601	95,695	-10%	716	752	746	685	662	3,561	-8%
Trumbull	6,227	6,395	6,234	6,252	5,599	30,707	-10%	387	425	399	399	384	1,994	-1%
Tuscarawas	3,151	3,241	3,152	3,113	3,060	15,717	-3%	189	188	178	188	199	942	5%
Union	1,426	1,361	1,487	1,374	1,421	7,069	0%	56	44	60	56	60	276	7%
Van Wert	908	891	943	890	909	4,541	0%	32	34	22	22	37	147	16%
Vinton	607	614	634	521	435	2,811	-28%	40	50	51	37	36	214	-10%
Warren	5,080	4,953	5,543	5,547	5,285	26,408	4%	243	266	277	300	258	1,344	6%
Washington	2,122	2,159	2,144	2,069	1,920	10,414	-10%	103	120	95	93	89	500	-14%
Wayne	3,137	3,264	3,571	3,396	3,135	16,503	0%	120	139	141	147	148	695	23%
Williams	1,423	1,396	1,429	1,463	1,423	7,134	0%	77	64	55	68	67	331	-13%
Wood	4,192	4,252	4,286	4,130	4,057	20,917	-3%	208	211	212	211	197	1,039	-5%
Wyandot	790	836	995	944	811	4,376	3%	45	42	45	59	41	232	-9%
<b>Total</b>	<b>387,075</b>	<b>386,076</b>	<b>392,683</b>	<b>381,639</b>	<b>358,127</b>	<b>1,905,600</b>	<b>-7%</b>	<b>16,794</b>	<b>17,560</b>	<b>17,361</b>	<b>17,244</b>	<b>16,474</b>	<b>85,433</b>	<b>-2%</b>

Source: 2001-2005 Ohio Department of Public Safety Traffic Crash Facts.



TABLE A2. TOTAL AND ALCOHOL-RELATED TRAFFIC CRASH INJURIES IN OHIO, 2001-2005\*

County	All Injuries							Alcohol-Related Injuries						
	2001	2002	2003	2004	2005	Total 2001-2005	% Change 2001-2005	2001	2002	2003	2004	2005	Total 2001-2005	% Change 2001-2005
Adams	383	393	417	450	353	1,996	-8%	66	53	50	52	46	267	-30%
Allen	1,619	1,675	1,883	1,626	1,480	8,283	-9%	80	122	95	85	120	502	50%
Ashland	697	776	662	597	539	3,271	-23%	57	64	45	63	50	279	-12%
Ashtabula	1,249	1,365	1,288	1,225	1,230	6,357	-2%	162	146	137	115	150	710	-7%
Athens	677	674	697	692	557	3,297	-18%	77	85	77	77	58	374	-25%
Auglaize	460	455	495	434	401	2,245	-13%	48	28	32	39	27	174	-44%
Belmont	762	722	770	773	652	3,679	-14%	118	100	112	94	86	510	-27%
Brown	526	550	546	627	490	2,739	-7%	50	44	42	50	56	242	12%
Buller	4,158	4,486	4,356	3,979	3,992	20,971	-4%	358	353	417	365	371	1,864	4%
Carroll	299	348	377	285	283	1,592	-5%	37	33	32	31	22	155	-41%
Champaign	380	449	460	428	408	2,125	7%	38	34	53	57	36	218	-5%
Clark	1,994	2,042	2,147	2,013	1,820	10,016	-9%	213	238	206	189	200	1,046	-6%
Clermont	2,363	2,481	2,534	2,478	2,183	12,039	-8%	183	203	213	175	184	958	1%
Clinton	543	527	531	527	476	2,704	6%	45	34	44	48	41	212	-9%
Columbiana	1,031	1,158	1,224	1,116	1,088	5,617	6%	114	163	125	99	112	613	-2%
Coshocton	317	385	355	308	292	1,657	-8%	40	45	31	34	40	190	0%
Crawford	459	494	374	432	372	2,131	-19%	55	68	44	31	30	228	-45%
Cuyahoga	15,420	15,369	15,840	16,015	14,319	76,963	-7%	1,027	1,096	1,043	934	935	5,035	-9%
Darke	485	534	535	543	503	2,600	4%	43	65	71	47	75	301	74%
Defiance	532	581	436	435	451	2,435	-15%	52	66	34	43	41	236	-21%
Delaware	1,214	1,263	1,188	1,357	1,300	6,322	7%	111	119	84	90	120	524	8%
Erie	1,149	1,125	1,082	1,089	995	5,440	-13%	110	91	83	56	98	438	-11%
Fairfield	1,401	1,429	1,519	1,598	1,502	7,449	7%	99	118	107	127	116	567	17%
Fayette	309	401	349	369	349	1,777	13%	38	37	34	28	37	174	-3%
Franklin	16,023	16,020	15,489	15,357	14,663	77,552	-8%	887	904	874	865	823	4,353	-7%
Fulton	523	519	489	485	499	2,515	-5%	59	61	49	51	42	262	-29%
Gallia	527	545	493	477	388	2,430	-26%	63	54	59	40	52	268	-17%
Geauga	937	1,017	914	999	951	4,818	1%	94	101	98	88	85	466	-10%
Greene	1,583	1,756	1,703	1,623	1,599	8,264	1%	142	136	149	159	163	749	15%
Guernsey	538	580	629	699	525	2,971	-2%	69	72	55	48	65	309	-6%
Hamilton	11,052	11,010	11,044	10,790	9,646	53,542	-13%	672	662	766	701	645	3,446	-4%
Hancock	911	879	884	1,033	853	4,560	-6%	84	61	61	86	63	355	-25%
Hardin	239	241	264	231	256	1,231	7%	31	33	23	30	45	162	45%
Harrison	138	151	189	196	158	832	14%	20	26	17	20	30	115	36%
Henry	306	334	313	313	294	1,560	-4%	45	45	18	37	25	170	-44%
Highland	463	427	404	454	459	2,207	-1%	48	38	52	41	50	229	4%
Hocking	358	369	397	379	335	1,838	-6%	38	60	49	45	42	234	11%
Holmes	293	360	373	349	330	1,705	13%	34	29	13	28	26	130	-24%
Huron	658	666	690	641	586	3,241	-11%	49	53	61	55	50	268	2%
Jackson	534	630	499	599	555	2,817	4%	54	70	61	59	53	297	-2%
Jefferson	729	737	688	699	800	3,653	10%	85	87	66	76	92	406	8%
Knox	585	589	687	713	684	3,258	17%	61	67	70	69	49	316	-20%
Lake	2,250	2,379	2,455	2,209	2,023	11,316	-10%	219	189	181	166	195	950	-11%
Lawrence	844	886	817	865	882	4,294	5%	90	87	62	87	91	417	1%
Licking	1,790	1,952	1,779	1,992	1,969	9,482	10%	157	187	150	192	162	848	3%
Logan	531	531	505	452	498	2,517	-6%	48	73	41	50	66	278	38%
Lorain	3,072	3,285	3,266	3,266	3,050	15,939	-1%	314	323	256	320	248	1,461	-21%
Lucas	7,622	7,188	7,008	6,989	6,630	35,437	-13%	440	416	362	401	472	2,091	7%
Madison	469	471	558	505	520	2,523	11%	51	45	33	66	64	259	25%
Mahoning	3,420	3,441	3,376	3,417	3,391	17,045	-1%	243	283	209	211	286	1,234	18%
Marion	820	858	800	784	804	4,066	-2%	69	75	62	65	48	319	-30%
Medina	1,385	1,551	1,583	1,539	1,510	7,568	9%	122	135	114	137	113	621	-7%
Meigs	257	251	253	290	255	1,306	-1%	28	44	31	43	26	172	-7%
Mercer	368	421	398	371	388	1,946	5%	46	72	65	59	61	303	33%
Miami	1,078	1,047	914	915	837	4,791	-22%	112	87	89	92	89	469	-21%
Monroe	88	129	121	129	112	579	27%	18	21	18	18	13	88	-28%
Montgomery	6,987	6,911	6,816	6,719	6,161	33,594	-12%	549	545	489	494	511	2,588	-7%
Morgan	154	148	116	147	135	700	-12%	20	15	23	32	28	118	40%
Morrow	359	391	440	415	526	2,131	47%	44	43	41	23	34	185	-23%
Muskingum	1,237	1,353	1,290	1,246	1,044	6,170	-16%	105	136	145	129	94	609	-10%
Noble	150	120	136	154	131	691	-13%	18	15	20	17	13	83	-28%
Ottawa	411	461	510	512	451	2,345	10%	41	60	67	56	28	252	-32%
Paulding	187	183	215	176	182	943	-3%	14	23	29	29	18	113	29%
Perry	401	380	365	349	342	1,837	-15%	58	41	50	63	50	262	-14%
Pickaway	584	711	658	658	614	3,225	5%	51	79	59	76	51	316	0%
Pike	393	397	406	493	437	2,126	11%	77	60	61	67	66	331	-14%
Portage	1,976	2,066	1,935	1,942	1,808	9,727	-9%	203	211	182	203	172	971	-15%
Preble	528	498	566	541	539	2,672	2%	57	43	57	40	68	265	19%
Pulnam	248	279	263	251	233	1,274	-6%	27	59	35	39	26	186	-4%
Richland	1,785	1,770	1,852	1,877	1,885	9,169	6%	181	149	175	116	123	744	-32%
Ross	1,090	1,161	1,135	1,165	1,046	5,597	-4%	139	103	108	126	83	559	-40%
Sandusky	731	757	765	799	724	3,776	-1%	76	75	86	65	77	379	1%
Scioto	1,286	1,225	1,303	1,240	1,144	6,198	-11%	130	118	93	121	99	561	-24%
Seneca	713	759	686	709	604	3,471	-15%	58	79	65	74	51	327	-12%
Shelby	446	516	498	524	539	2,523	21%	57	64	45	42	51	259	-11%
Stark	4,530	5,298	5,101	5,122	4,811	24,862	6%	381	424	417	478	434	2,134	14%
Summit	6,629	7,204	6,762	6,416	6,155	33,166	-7%	496	494	440	411	430	2,271	-13%
Trumbull	2,739	2,905	2,772	2,589	2,448	13,453	-11%	278	354	287	242	303	1,464	9%
Tuscarawas	1,154	1,209	994	1,118	1,120	5,595	-3%	151	149	97	133	131	661	-13%
Union	424	459	498	417	438	2,236	3%	42	31	46	36	43	198	2%
Van Wert	294	332	292	294	276	1,488	-6%	28	29	13	10	32	112	14%
Vinton	199	234	169	215	199	1,016	0%	31	54	37	38	25	185	-19%
Warren	1,650	1,837	1,848	1,900	1,836	9,071	11%	154	174	159	179	177	843	15%
Washington	742	780	740	749	690	3,701	-7%	60	97	74	77	78	366	30%
Wayne	1,152	1,304	1,296	1,362	1,371	6,485	19%	82	100	91	89	110	472	34%
Williams	426	404	402	438	451	2,121	6%	45	39	42	42	48	216	7%
Wood	1,603	1,489	1,507	1,506	1,444	7,549	-10%	117	138	113	136	116	620	-1%
Wyandot	200	232	258	263	199	1,152	-1%	21	13	37	46	29	146	38%
<b>Total</b>	<b>140,226</b>	<b>144,675</b>	<b>142,641</b>	<b>141,462</b>	<b>132,568</b>	<b>701,572</b>	<b>-5%</b>	<b>11,506</b>	<b>12,015</b>	<b>11,108</b>	<b>11,045</b>	<b>10,984</b>	<b>56,658</b>	<b>-5%</b>

Source: 2001-2005 Ohio Department of Public Safety Traffic Crash Facts.

\*Injuries includes fatalities, incapacitating injuries, non-incapacitating injuries, and possible injuries.



TABLE A3. TOTAL AND ALCOHOL-RELATED TRAFFIC CRASH INJURIES BY SEVERITY IN OHIO, 2001-2005

County	All Injuries, 2001-2005					Alcohol-Related Injuries, 2001-2005				
	Fatal	Incapacitating	Non-Incapacitating	Possible	Total	Fatal	Incapacitating	Non-Incapacitating	Possible	Total
Adams	40	280	1,064	612	1,996	15	48	161	43	267
Allen	77	594	3,263	4,349	8,283	21	100	234	147	502
Ashland	40	375	1,566	1,290	3,271	7	59	161	52	279
Ashtabula	111	610	3,021	2,615	6,357	50	143	362	155	710
Athens	47	273	1,402	1,575	3,297	21	69	207	77	374
Auglaize	44	254	1,082	865	2,245	9	39	91	35	174
Belmont	65	314	1,654	1,644	3,679	26	83	291	110	510
Brown	33	403	1,430	873	2,739	12	56	122	52	242
Butler	167	1,860	8,351	10,593	20,971	54	336	914	560	1,864
Carroll	17	142	751	682	1,592	5	28	90	32	155
Champaign	31	319	977	798	2,125	8	57	115	38	218
Clark	102	700	4,236	4,978	10,016	41	136	578	291	1,046
Clermont	133	1,394	4,736	5,776	12,039	35	225	470	228	958
Clinton	50	327	1,429	898	2,704	9	52	128	23	212
Columbiana	74	627	2,426	2,490	5,617	21	117	371	104	613
Coshocton	32	235	682	708	1,657	9	58	81	42	190
Crawford	33	217	891	990	2,131	11	50	103	64	228
Cuyahoga	338	4,683	21,883	50,059	76,963	134	775	1,998	2,128	5,035
Darke	54	230	1,046	1,270	2,600	17	43	159	82	301
DeLancey	43	171	1,100	1,121	2,435	15	36	138	47	236
Delaware	90	578	2,804	2,850	6,322	23	110	257	134	524
Erie	52	452	2,359	2,577	5,440	15	85	212	125	437
Fairfield	84	643	2,925	3,797	7,449	30	92	285	160	567
Fayette	28	239	859	651	1,777	12	47	87	28	174
Franklin	421	4,848	28,885	43,398	77,552	119	618	1,978	1,638	4,353
Fulton	64	310	1,127	1,014	2,515	20	62	130	50	262
Gallia	25	216	1,257	932	2,430	12	41	164	51	268
Geauga	60	622	2,248	1,888	4,818	20	107	228	111	466
Greene	104	704	3,608	3,848	8,264	36	137	362	214	749
Guernsey	34	269	1,283	1,385	2,971	13	53	161	82	309
Hamilton	328	3,837	19,966	29,411	53,542	115	606	1,673	1,052	3,446
Hancock	53	406	1,861	2,240	4,560	15	71	174	95	355
Hardin	39	159	603	430	1,231	15	38	85	24	162
Harrison	24	95	484	229	832	5	16	80	14	115
Henry	60	233	681	586	1,560	15	43	89	23	170
Highland	40	245	1,031	891	2,207	13	47	114	55	229
Hocking	25	213	850	750	1,838	12	47	126	49	234
Holmes	31	173	984	517	1,705	8	28	81	13	130
Huron	57	279	1,618	1,287	3,241	14	43	157	54	268
Jackson	34	250	1,454	1,079	2,817	14	54	166	63	297
Jefferson	41	344	1,581	1,687	3,653	11	72	238	85	406
Knox	47	233	1,486	1,492	3,258	12	49	176	79	316
Lake	59	812	4,522	5,923	11,316	26	186	472	266	950
Lawrence	37	274	1,792	2,191	4,294	13	70	214	120	417
Licking	113	921	3,897	4,551	9,482	41	163	406	238	848
Logan	57	198	1,142	1,120	2,517	19	43	161	55	278
Lorain	120	1,127	5,912	8,780	15,939	42	215	695	509	1,461
Lucas	207	2,950	11,594	20,684	35,435	69	392	895	735	2,091
Madison	50	312	1,124	1,037	2,523	14	62	124	59	259
Mahoning	148	1,111	6,304	9,482	17,045	58	185	610	381	1,234
Marion	44	320	1,780	1,922	4,066	13	58	171	77	319
Medina	92	633	2,914	3,929	7,568	34	96	310	181	621
Meigs	27	181	718	380	1,306	11	40	93	28	172
Mercer	35	174	984	753	1,946	6	49	175	73	303
Miami	70	465	1,959	2,297	4,791	23	92	231	123	469
Monroe	17	90	291	181	579	6	22	42	18	88
Montgomery	266	3,336	12,721	17,271	33,594	96	531	1,157	804	2,588
Morgan	27	76	282	315	700	10	24	50	34	118
Morrow	43	174	1,132	782	2,131	13	37	102	33	185
Muskingum	71	336	2,284	3,479	6,170	21	65	345	178	609
Noble	17	72	301	301	691	7	14	33	29	83
Ottawa	45	246	1,158	896	2,345	18	60	132	42	252
Paulding	41	113	410	379	943	19	21	53	20	113
Perry	47	216	939	635	1,837	20	50	153	39	262
Pickaway	70	376	1,476	1,303	3,225	25	48	151	92	316
Pike	30	257	1,079	760	2,126	11	65	188	67	331
Portage	115	937	4,183	4,492	9,727	41	207	498	225	971
Preble	51	347	1,202	1,072	2,672	10	53	128	74	265
Putnam	34	179	623	438	1,274	14	39	91	42	186
Richland	73	961	3,856	4,279	9,169	15	154	413	162	744
Ross	66	514	2,441	2,576	5,597	32	107	274	146	559
Sandusky	77	385	1,774	1,540	3,776	25	69	207	78	379
Scioto	71	493	2,877	2,757	6,198	21	97	302	141	561
Seneca	54	446	1,529	1,442	3,471	13	74	185	55	327
Shelby	36	209	1,118	1,160	2,523	7	45	136	71	259
Stark	201	1,600	9,856	13,205	24,862	74	325	1,075	660	2,134
Summit	210	3,025	11,283	18,648	33,166	92	441	1,024	714	2,271
Trumbull	134	1,099	4,716	7,504	13,453	58	218	747	441	1,464
Tuscarawas	76	471	2,418	2,630	5,595	34	96	378	153	661
Union	29	214	1,075	918	2,236	9	38	116	35	198
Van Wert	22	127	754	585	1,488	7	15	63	27	112
Vinton	27	130	606	253	1,016	12	50	92	31	185
Warren	95	676	3,984	4,316	9,071	36	122	451	234	843
Washington	62	242	1,490	1,907	3,701	27	58	191	90	366
Wayne	68	552	3,436	2,429	6,485	19	94	254	105	472
Williams	56	203	1,065	797	2,121	11	48	134	23	216
Wood	93	965	3,138	3,353	7,549	20	177	274	149	620
Wyandot	30	132	558	432	1,152	10	20	77	39	146
<b>Total</b>	<b>6,685</b>	<b>58,033</b>	<b>273,641</b>	<b>363,211</b>	<b>701,570</b>	<b>2,271</b>	<b>10,111</b>	<b>27,870</b>	<b>16,405</b>	<b>56,657</b>

Source: 2001-2005 Ohio Department of Public Safety Traffic Crash Facts.



TABLE A4. OVI CONVICTIONS IN OHIO, 2001-2005

County	2001	2002	2003	2004	2005	Total 2001-2005	% Change 2001-2005
Adams	183	169	173	166	138	829	-25%
Allen	569	596	582	584	648	2,979	14%
Ashland	287	271	240	245	238	1,281	-17%
Ashtabula	516	452	542	557	456	2,523	-12%
Athens	259	275	232	295	307	1,368	19%
Auglaize	252	242	253	282	305	1,334	21%
Belmont	354	316	362	303	392	1,727	11%
Brown	262	252	241	231	271	1,257	3%
Butler	1536	1568	1812	1579	1556	8,051	1%
Carroll	153	167	123	110	148	701	-3%
Champaign	220	205	209	192	191	1,017	-13%
Clark	688	677	676	617	644	3,302	-6%
Clermont	966	1179	950	865	921	4,881	-5%
Clinton	263	172	199	237	190	1,061	-28%
Columbiana	501	480	497	463	462	2,403	-8%
Coshocton	159	146	192	175	151	823	-5%
Crawford	278	266	309	326	272	1,451	-2%
Cuyahoga	5225	4861	5053	4961	4751	24,851	-9%
Darke	177	244	174	160	175	930	-1%
DeLancey	253	201	203	265	293	1,215	16%
Delaware	321	494	467	476	485	2,243	51%
Erie	600	596	603	571	501	2,871	-17%
Fairfield	481	628	563	638	564	2,874	17%
Fayette	135	159	160	181	150	785	11%
Franklin	4152	4166	4435	4678	5060	22,491	22%
Fulton	175	190	228	234	205	1,032	17%
Gallia	140	115	125	183	132	695	-6%
Geauga	324	341	347	390	370	1,772	14%
Greene	661	491	537	498	490	2,677	-26%
Guernsey	343	280	270	307	290	1,490	-15%
Hamilton	2640	2843	2869	2690	2639	13,681	0%
Hancock	444	472	420	427	398	2,161	-10%
Hardin	121	145	133	135	121	655	0%
Harrison	84	78	71	67	86	386	2%
Henry	179	149	159	177	163	827	-9%
Highland	247	206	236	260	225	1,174	-9%
Hocking	152	152	133	148	132	717	-13%
Holmes	99	87	96	89	90	461	-9%
Huron	322	395	388	441	383	1,929	19%
Jackson	274	216	261	268	281	1,300	3%
Jefferson	296	313	353	267	299	1,528	1%
Knox	227	205	258	253	286	1,229	26%
Lake	1115	1029	1133	1119	1225	5,621	10%
Lawrence	280	304	287	231	240	1,342	-14%
Licking	744	749	786	735	739	3,753	-1%
Logan	219	237	239	261	257	1,213	17%
Lorain	1702	1867	1770	1685	1635	8,659	-4%
Lucas	1176	1207	1581	1648	1456	7,068	24%
Madison	169	137	133	135	125	699	-26%
Mahoning	873	885	870	748	718	4,094	-18%
Marion	405	546	492	469	413	2,325	2%
Medina	856	753	926	995	865	4,395	1%
Meigs	161	161	78	61	82	543	-49%
Mercer	147	203	196	218	235	999	60%
Miami	415	410	398	363	408	1,994	-2%
Monroe	47	45	55	51	39	237	-17%
Montgomery	1890	1870	1895	1681	1607	8,943	-15%
Morgan	77	75	63	68	91	374	18%
Morrow	155	223	183	166	206	933	33%
Muskingum	498	505	485	494	516	2,498	4%
Noble	61	55	90	50	56	312	-8%
Ottawa	206	249	272	239	256	1,222	24%
Paulding	94	64	86	110	112	466	19%
Perry	184	166	160	164	166	840	-10%
Pickaway	181	176	218	277	203	1,055	12%
Pike	169	136	165	174	116	760	-31%
Portage	937	973	987	990	924	4,811	-1%
Preble	173	178	140	117	138	746	-20%
Putnam	127	135	109	121	133	625	5%
Richland	708	659	663	621	661	3,312	-7%
Ross	306	291	316	369	331	1,613	8%
Sandusky	459	449	405	423	404	2,140	-12%
Scioto	535	462	493	431	396	2,317	-26%
Seneca	281	344	330	305	345	1,605	23%
Shelby	259	266	269	249	341	1,384	32%
Stark	2374	2108	2041	1876	1890	10,289	-20%
Summit	2621	2547	2694	2478	2428	12,768	-7%
Trumbull	984	973	867	842	769	4,435	-22%
Tuscarawas	537	545	496	452	491	2,521	-9%
Union	188	202	202	197	221	1,010	18%
Van Wert	120	130	138	124	122	634	2%
Vinton	64	59	66	66	94	349	47%
Warren	768	701	744	749	795	3,757	4%
Washington	256	257	292	258	359	1,422	40%
Wayne	471	449	449	493	422	2,284	-10%
Williams	180	158	168	212	193	911	7%
Wood	403	418	471	550	615	2,457	53%
Wyandot	130	161	140	153	127	711	-2%
Unknown	1,581	3,476	1,514	300	23	6,894	-----
<b>Total</b>	<b>51,804</b>	<b>53,453</b>	<b>52,689</b>	<b>50,509</b>	<b>49,847</b>	<b>258,302</b>	<b>-4%</b>

Source: 2001-2005 Ohio Department of Public Safety, Bureau of Motor Vehicles OVI Convictions by County.



TABLE A5. OVI DRIVERS IN OHIO, 2001-2005

County	All OVI Drivers							% Repeat Offenders						
	2001	2002	2003	2004	2005	Total 2001-2005	% Change 2001-2005	2001	2002	2003	2004	2005	Total 2001-2005	
Adams	172	164	169	154	130	789	-24%	62%	58%	54%	60%	55%	58%	
Allen	546	577	564	564	618	2,869	13%	43%	42%	41%	41%	37%	41%	
Ashland	279	265	231	234	235	1,244	-16%	44%	40%	47%	44%	40%	43%	
Ashtabula	493	437	512	538	443	2,423	-10%	53%	47%	56%	48%	50%	51%	
Athens	247	264	220	277	295	1,303	19%	45%	55%	48%	42%	40%	46%	
Auglaize	245	233	245	278	287	1,288	17%	45%	39%	42%	44%	50%	44%	
Belmont	339	301	351	297	381	1,669	12%	53%	48%	48%	44%	47%	49%	
Brown	251	237	224	226	254	1,192	1%	64%	54%	56%	58%	50%	56%	
Butler	1479	1486	1728	1531	1504	7,728	2%	51%	49%	46%	44%	42%	46%	
Carroll	148	159	121	109	142	679	-4%	46%	53%	56%	48%	50%	51%	
Champaign	213	197	204	188	180	982	-15%	50%	50%	50%	43%	44%	48%	
Clark	664	634	642	601	615	3,156	-7%	45%	46%	43%	42%	41%	43%	
Clermont	931	1121	909	830	885	4,676	-5%	49%	50%	50%	48%	49%	49%	
Clinton	248	166	186	222	183	1,005	-26%	50%	55%	43%	50%	44%	48%	
Columbiana	483	464	483	445	448	2,323	-7%	47%	42%	50%	49%	44%	47%	
Coshocton	152	144	188	171	149	804	-2%	39%	47%	51%	46%	40%	45%	
Crawford	272	258	302	312	265	1,409	-3%	50%	44%	54%	49%	49%	49%	
Cuyahoga	5055	4728	4896	4841	4629	24,149	-8%	42%	40%	41%	40%	38%	40%	
Darke	170	235	171	157	167	900	-2%	51%	56%	46%	46%	50%	50%	
Defiance	243	196	195	252	279	1,165	15%	53%	47%	48%	50%	47%	49%	
Delaware	314	481	449	465	470	2,179	50%	41%	44%	38%	34%	37%	38%	
Erie	567	571	576	548	487	2,749	-14%	52%	50%	47%	48%	48%	49%	
Fairfield	469	610	539	611	548	2,777	17%	42%	46%	46%	43%	39%	43%	
Fayette	133	153	156	176	147	765	11%	47%	48%	37%	39%	42%	42%	
Franklin	4058	4026	4318	4536	4954	21,892	22%	40%	36%	36%	34%	34%	37%	
Fulton	168	184	222	228	202	1,004	20%	43%	40%	46%	43%	40%	43%	
Gallia	130	108	115	172	128	653	-2%	65%	46%	58%	55%	51%	55%	
Geauga	318	332	335	374	354	1,713	11%	46%	42%	38%	38%	49%	42%	
Greene	625	472	519	481	483	2,580	-23%	43%	43%	40%	43%	40%	42%	
Guernsey	326	274	262	298	281	1,441	-14%	54%	48%	51%	54%	49%	51%	
Hamilton	2559	2773	2813	2614	2576	13,335	1%	42%	42%	39%	38%	37%	40%	
Hancock	424	444	411	409	389	2,077	-8%	47%	47%	43%	43%	41%	45%	
Hardin	115	140	132	135	118	640	3%	43%	55%	44%	41%	43%	45%	
Harrison	81	77	67	66	84	375	4%	46%	49%	46%	59%	57%	51%	
Henry	171	143	158	167	162	801	-5%	45%	46%	53%	49%	52%	49%	
Highland	239	193	223	245	218	1,118	-9%	58%	55%	56%	52%	50%	54%	
Hocking	148	146	122	143	129	688	-13%	49%	49%	59%	50%	52%	52%	
Holmes	96	82	93	88	88	447	-8%	48%	39%	38%	43%	51%	44%	
Huron	314	374	371	425	372	1,856	18%	50%	44%	47%	43%	40%	45%	
Jackson	255	203	245	256	261	1,220	2%	46%	47%	53%	50%	47%	49%	
Jefferson	283	296	337	254	283	1,453	0%	42%	51%	45%	44%	42%	45%	
Knox	223	199	250	251	278	1,201	25%	45%	44%	44%	41%	47%	44%	
Lake	1076	997	1101	1086	1194	5,454	11%	50%	48%	48%	49%	46%	48%	
Lawrence	273	290	279	222	232	1,296	-15%	38%	45%	51%	40%	40%	43%	
Licking	722	731	764	722	720	3,659	0%	48%	46%	44%	43%	44%	45%	
Logan	208	234	230	249	241	1,162	16%	46%	48%	45%	47%	45%	46%	
Lorain	1621	1784	1689	1614	1571	8,279	-3%	52%	49%	47%	50%	51%	50%	
Lucas	1143	1190	1545	1605	1411	6,894	23%	36%	33%	33%	31%	31%	33%	
Madison	164	132	128	134	125	683	-24%	54%	47%	53%	54%	46%	51%	
Mahoning	835	857	842	735	701	3,970	-16%	46%	44%	46%	44%	41%	44%	
Marion	388	530	474	451	409	2,252	5%	50%	44%	42%	45%	50%	46%	
Medina	835	731	902	978	830	4,276	-1%	41%	44%	40%	42%	40%	42%	
Meigs	153	154	71	60	79	517	-48%	46%	53%	54%	50%	47%	50%	
Mercer	144	197	188	207	221	957	53%	49%	39%	47%	49%	41%	45%	
Miami	400	392	377	357	396	1,922	-1%	47%	46%	46%	45%	49%	47%	
Monroe	45	44	55	46	38	228	-16%	42%	45%	42%	35%	34%	40%	
Montgomery	1819	1811	1833	1620	1557	8,640	-14%	44%	41%	40%	39%	40%	41%	
Morgan	75	75	61	67	86	364	15%	57%	53%	56%	52%	52%	54%	
Morrow	150	211	175	159	198	893	32%	51%	56%	58%	47%	45%	52%	
Muskingum	488	494	470	481	501	2,434	3%	47%	46%	51%	48%	49%	48%	
Noble	59	53	85	50	55	302	-7%	54%	43%	45%	48%	36%	45%	
Ottawa	201	244	266	223	243	1,177	21%	44%	47%	48%	45%	44%	46%	
Paulding	85	62	85	106	110	448	29%	40%	47%	46%	41%	45%	44%	
Perry	179	164	157	156	162	818	-9%	52%	57%	46%	49%	46%	50%	
Pickaway	174	169	217	271	196	1,027	13%	44%	45%	41%	39%	40%	42%	
Pike	162	129	155	165	113	724	-30%	53%	57%	52%	54%	48%	53%	
Portage	889	923	935	934	878	4,559	-1%	49%	49%	47%	47%	48%	48%	
Preble	171	173	136	115	134	729	-22%	51%	45%	41%	54%	51%	48%	
Pulnam	123	133	105	115	131	607	7%	40%	41%	45%	38%	47%	42%	
Richland	680	632	644	604	632	3,192	-7%	45%	47%	46%	50%	47%	47%	
Ross	295	281	308	365	326	1,575	11%	52%	45%	49%	45%	41%	46%	
Sandusky	440	433	385	412	390	2,060	-11%	49%	46%	47%	45%	48%	47%	
Scioto	509	447	468	407	385	2,216	-24%	49%	50%	42%	50%	48%	48%	
Seneca	274	334	319	293	306	1,526	12%	42%	40%	44%	37%	43%	41%	
Shelby	248	256	256	241	336	1,337	35%	47%	47%	45%	47%	43%	46%	
Stark	2308	2064	1984	1836	1850	10,042	-20%	45%	48%	46%	42%	44%	45%	
Summit	2528	2461	2593	2404	2371	12,357	-6%	46%	45%	43%	42%	42%	44%	
Trumbull	937	912	833	809	737	4,228	-21%	50%	50%	49%	47%	51%	49%	
Tuscarawas	515	512	480	440	475	2,422	-8%	49%	47%	40%	48%	45%	46%	
Union	182	195	197	192	216	982	19%	47%	38%	43%	51%	43%	44%	
Van Wert	116	126	135	122	120	619	3%	40%	37%	47%	41%	44%	42%	
Vinton	63	57	61	63	88	332	40%	56%	54%	51%	54%	58%	55%	
Warren	733	674	715	722	773	3,617	5%	47%	52%	45%	46%	45%	47%	
Washington	246	250	283	253	346	1,378	41%	40%	51%	43%	35%	40%	42%	
Wayne	456	442	439	477	412	2,226	-10%	44%	44%	45%	39%	43%	43%	
Williams	175	153	159	200	186	873	6%	49%	42%	49%	45%	50%	47%	
Wood	394	408	460	543	600	2,405	52%	37%	31%	30%	35%	37%	34%	
Wyandot	126	157	139	149	125	696	-1%	47%	46%	45%	41%	37%	43%	
Unknown	1516	3290	1420	287	23	6,536	-----	30%	42%	46%	38%	9%	40%	
<b>Total</b>	<b>49,969</b>	<b>51,535</b>	<b>50,857</b>	<b>48,916</b>	<b>48,330</b>	<b>249,607</b>	<b>-3%</b>	<b>45%</b>	<b>45%</b>	<b>44%</b>	<b>42%</b>	<b>42%</b>	<b>44%</b>	

Source: 2001-2005 Ohio Department of Public Safety, Bureau of Motor Vehicles OVI Convictions by County.



TABLE A6. ECONOMIC COSTS OF TRAFFIC CRASHES IN OHIO, 2001-2005

County	All Crashes					Alcohol-Related Crashes						
	2001	2002	2003	2004	2005	Total 2001-2005	2001	2002	2003	2004	2005	Total 2001-2005
Adams	\$17,092,000	\$21,802,000	\$15,422,000	\$23,123,000	\$20,499,000	\$97,938,000	\$6,231,000	\$7,312,000	\$3,476,000	\$2,581,000	\$4,458,000	\$24,058,000
Allen	\$52,353,000	\$57,518,000	\$58,271,000	\$43,613,000	\$53,465,000	\$265,220,000	\$4,139,000	\$12,033,000	\$5,088,000	\$4,656,000	\$11,373,000	\$97,269,000
Ashland	\$24,368,000	\$32,580,000	\$28,118,000	\$18,632,000	\$28,118,000	\$126,776,000	\$5,038,000	\$4,732,000	\$1,716,000	\$1,698,000	\$2,613,000	\$15,797,000
Ashtabula	\$59,112,000	\$53,475,000	\$48,601,000	\$55,212,000	\$59,134,000	\$275,534,000	\$19,457,000	\$11,665,000	\$12,608,000	\$14,847,000	\$17,556,000	\$76,133,000
Athens	\$27,878,000	\$19,249,000	\$27,565,000	\$27,182,000	\$26,497,000	\$128,371,000	\$6,522,000	\$5,428,000	\$7,808,000	\$7,943,000	\$6,241,000	\$33,942,000
Aurgraize	\$24,705,000	\$23,495,000	\$16,237,000	\$29,661,000	\$24,818,000	\$106,231,000	\$2,394,000	\$3,115,000	\$932,000	\$6,901,000	\$1,840,000	\$15,182,000
Belmont	\$34,027,000	\$33,625,000	\$38,127,000	\$29,661,000	\$24,148,000	\$159,588,000	\$5,322,000	\$11,935,000	\$14,161,000	\$4,794,000	\$6,539,000	\$42,751,000
Brown	\$18,304,000	\$22,828,000	\$19,553,000	\$25,369,000	\$23,221,000	\$109,275,000	\$3,749,000	\$5,729,000	\$2,418,000	\$2,636,000	\$6,044,000	\$20,576,000
Butler	\$130,868,000	\$129,714,000	\$132,981,000	\$124,842,000	\$137,151,000	\$655,556,000	\$21,542,000	\$19,940,000	\$21,379,000	\$21,959,000	\$24,476,000	\$109,296,000
Carroll	\$10,895,000	\$11,323,000	\$13,206,000	\$10,116,000	\$10,905,000	\$56,445,000	\$3,336,000	\$1,979,000	\$850,000	\$1,972,000	\$1,639,000	\$9,776,000
Champaign	\$12,243,000	\$16,597,000	\$15,775,000	\$24,759,000	\$19,865,000	\$89,239,000	\$1,105,000	\$1,187,000	\$3,806,000	\$7,422,000	\$2,085,000	\$15,605,000
Clark	\$64,716,000	\$56,998,000	\$74,486,000	\$57,474,000	\$71,390,000	\$325,064,000	\$11,876,000	\$12,035,000	\$15,395,000	\$13,761,000	\$18,324,000	\$71,391,000
Clermont	\$89,820,000	\$81,020,000	\$89,340,000	\$91,326,000	\$84,486,000	\$435,992,000	\$13,989,000	\$12,333,000	\$15,571,000	\$14,606,000	\$10,649,000	\$67,148,000
Clinton	\$19,629,000	\$22,954,000	\$32,600,000	\$21,709,000	\$30,385,000	\$127,277,000	\$4,826,000	\$1,203,000	\$6,921,000	\$1,510,000	\$2,155,000	\$16,615,000
Columbiana	\$35,661,000	\$48,211,000	\$51,852,000	\$42,759,000	\$39,721,000	\$218,204,000	\$7,569,000	\$11,320,000	\$10,234,000	\$3,876,000	\$7,532,000	\$40,531,000
Coshocton	\$18,086,000	\$22,856,000	\$13,992,000	\$16,136,000	\$12,952,000	\$84,022,000	\$5,746,000	\$3,948,000	\$935,000	\$2,153,000	\$3,461,000	\$16,243,000
Crawford	\$22,448,000	\$18,939,000	\$14,956,000	\$17,153,000	\$16,555,000	\$90,051,000	\$7,167,000	\$4,318,000	\$2,161,000	\$2,084,000	\$3,055,000	\$18,785,000
Cuyahoga	\$400,507,000	\$384,734,000	\$391,981,000	\$391,694,000	\$344,968,000	\$1,913,888,000	\$38,286,000	\$60,849,000	\$63,570,000	\$64,777,000	\$43,580,000	\$271,062,000
Darke	\$22,601,000	\$22,588,000	\$24,627,000	\$27,697,000	\$24,025,000	\$121,538,000	\$3,292,000	\$3,951,000	\$4,106,000	\$4,614,000	\$8,644,000	\$26,607,000
Defiance	\$30,563,000	\$22,540,000	\$17,475,000	\$16,292,000	\$24,560,000	\$106,209,000	\$7,119,000	\$1,531,000	\$6,384,000	\$5,643,000	\$4,466,000	\$23,143,000
Delaware	\$46,395,000	\$47,184,000	\$53,007,000	\$54,418,000	\$52,184,000	\$253,188,000	\$5,123,000	\$7,654,000	\$5,889,000	\$9,535,000	\$12,420,000	\$40,621,000
Erie	\$36,132,000	\$39,189,000	\$37,205,000	\$35,454,000	\$34,292,000	\$182,272,000	\$7,017,000	\$6,837,000	\$6,951,000	\$4,158,000	\$3,692,000	\$28,655,000
Fairfield	\$46,418,000	\$50,701,000	\$54,477,000	\$52,736,000	\$57,154,000	\$261,486,000	\$7,043,000	\$10,905,000	\$7,195,000	\$12,322,000	\$10,976,000	\$48,441,000
Fayette	\$15,612,000	\$21,593,000	\$14,602,000	\$11,788,000	\$15,467,000	\$79,062,000	\$5,514,000	\$3,386,000	\$4,853,000	\$2,096,000	\$3,128,000	\$19,977,000
Franklin	\$433,366,000	\$426,264,000	\$408,485,000	\$403,893,000	\$390,227,000	\$2,062,235,000	\$37,457,000	\$54,378,000	\$57,036,000	\$44,491,000	\$44,788,000	\$238,150,000
Fulton	\$22,546,000	\$30,450,000	\$26,874,000	\$24,336,000	\$30,259,000	\$134,465,000	\$2,836,000	\$7,343,000	\$7,099,000	\$6,949,000	\$5,997,000	\$30,524,000
Gallia	\$17,726,000	\$22,303,000	\$18,502,000	\$13,957,000	\$12,757,000	\$85,245,000	\$5,227,000	\$5,683,000	\$4,999,000	\$2,172,000	\$2,338,000	\$20,419,000
Geauga	\$38,533,000	\$38,903,000	\$37,209,000	\$41,056,000	\$34,043,000	\$189,744,000	\$7,148,000	\$5,933,000	\$5,158,000	\$11,764,000	\$5,900,000	\$35,903,000
Greene	\$46,221,000	\$61,121,000	\$69,556,000	\$60,477,000	\$69,905,000	\$307,280,000	\$7,561,000	\$9,928,000	\$8,626,000	\$13,804,000	\$20,455,000	\$60,374,000
Guernsey	\$19,781,000	\$23,525,000	\$17,343,000	\$22,109,000	\$26,326,000	\$109,084,000	\$2,838,000	\$2,802,000	\$3,949,000	\$4,644,000	\$8,522,000	\$22,755,000
Hamilton	\$312,767,000	\$336,506,000	\$332,053,000	\$323,485,000	\$292,712,000	\$1,597,523,000	\$33,999,000	\$47,400,000	\$50,344,000	\$47,896,000	\$39,556,000	\$219,195,000
Hancock	\$32,368,000	\$34,599,000	\$32,723,000	\$37,208,000	\$30,699,000	\$167,597,000	\$7,893,000	\$6,053,000	\$6,370,000	\$4,451,000	\$1,850,000	\$26,617,000
Hardin	\$10,985,000	\$24,660,000	\$15,020,000	\$14,625,000	\$12,891,000	\$78,181,000	\$2,049,000	\$4,255,000	\$5,136,000	\$4,284,000	\$6,093,000	\$21,817,000
Harrison	\$9,563,000	\$9,739,000	\$8,475,000	\$12,155,000	\$9,661,000	\$49,593,000	\$511,000	\$2,886,000	\$384,000	\$1,789,000	\$3,038,000	\$8,608,000
Henry	\$21,051,000	\$31,009,000	\$19,868,000	\$17,537,000	\$20,204,000	\$109,669,000	\$4,973,000	\$7,038,000	\$2,644,000	\$5,762,000	\$1,729,000	\$22,146,000
Highland	\$19,461,000	\$18,931,000	\$22,437,000	\$18,277,000	\$23,494,000	\$102,600,000	\$2,290,000	\$4,558,000	\$3,661,000	\$4,531,000	\$6,065,000	\$21,105,000
Hocking	\$11,246,000	\$15,977,000	\$20,585,000	\$12,146,000	\$12,990,000	\$72,944,000	\$859,000	\$5,321,000	\$6,838,000	\$2,327,000	\$4,606,000	\$19,951,000
Holmes	\$20,557,000	\$15,883,000	\$16,465,000	\$12,324,000	\$15,600,000	\$80,829,000	\$3,282,000	\$3,064,000	\$2,698,000	\$2,035,000	\$1,797,000	\$12,876,000
Huron	\$27,408,000	\$25,308,000	\$30,458,000	\$26,590,000	\$30,545,000	\$140,309,000	\$2,435,000	\$4,963,000	\$4,745,000	\$3,588,000	\$7,084,000	\$22,815,000
Jackson	\$22,448,000	\$22,626,000	\$16,551,000	\$18,476,000	\$24,512,000	\$104,613,000	\$7,018,000	\$5,213,000	\$5,101,000	\$2,965,000	\$3,522,000	\$23,819,000
Jefferson	\$30,875,000	\$27,441,000	\$20,909,000	\$25,533,000	\$27,542,000	\$132,300,000	\$5,843,000	\$6,884,000	\$3,013,000	\$4,270,000	\$3,215,000	\$23,225,000
Knox	\$26,412,000	\$24,338,000	\$25,383,000	\$22,297,000	\$27,146,000	\$130,576,000	\$6,221,000	\$3,843,000	\$2,658,000	\$3,988,000	\$4,391,000	\$21,641,000
Lake	\$63,955,000	\$69,799,000	\$70,158,000	\$54,992,000	\$60,727,000	\$319,631,000	\$8,612,000	\$13,027,000	\$11,682,000	\$7,514,000	\$14,089,000	\$54,924,000
Lawrence	\$20,198,000	\$30,310,000	\$26,157,000	\$26,462,000	\$25,646,000	\$128,773,000	\$2,048,000	\$8,837,000	\$3,785,000	\$5,969,000	\$4,591,000	\$25,230,000
Licking	\$67,360,000	\$70,140,000	\$61,098,000	\$71,772,000	\$74,194,000	\$344,564,000	\$10,391,000	\$15,118,000	\$11,889,000	\$15,776,000	\$15,822,000	\$68,996,000
Logan	\$24,415,000	\$30,769,000	\$21,935,000	\$22,764,000	\$26,775,000	\$126,658,000	\$5,793,000	\$9,443,000	\$9,483,000	\$4,865,000	\$7,296,000	\$28,686,000
Lorain	\$103,065,000	\$100,721,000	\$93,532,000	\$91,954,000	\$94,954,000	\$474,056,000	\$20,653,000	\$21,710,000	\$13,732,000	\$15,756,000	\$10,989,000	\$82,840,000
Lucas	\$209,664,000	\$201,235,000	\$186,346,000	\$190,370,000	\$207,519,000	\$995,134,000	\$19,844,000	\$27,479,000	\$25,443,000	\$22,444,000	\$36,298,000	\$131,508,000
Madison	\$18,887,000	\$23,762,000	\$18,023,000	\$27,075,000	\$29,976,000	\$117,723,000	\$2,532,000	\$4,909,000	\$2,041,000	\$6,066,000	\$7,697,000	\$23,245,000
Mahoning	\$96,912,000	\$114,661,000	\$90,422,000	\$114,278,000	\$102,295,000	\$518,568,000	\$13,476,000	\$19,145,000	\$13,043,000	\$26,157,000	\$23,974,000	\$95,795,000
Marion	\$33,650,000	\$27,526,000	\$29,503,000	\$28,989,000	\$22,286,000	\$141,954,000	\$3,963,000	\$4,374,000	\$8,343,000	\$4,020,000	\$2,566,000	\$23,266,000
Medina	\$50,226,000	\$64,343,000	\$51,283,000	\$58,240,000	\$50,767,000	\$274,859,000	\$7,674,000	\$13,576,000	\$9,908,000	\$15,979,000	\$7,066,000	\$54,203,000
Meigs	\$13,776,000	\$16,935,000	\$10,941,000	\$10,788,000	\$12,948,000	\$65,388,000	\$2,064,000	\$5,773,000	\$3,499,000	\$4,178,000	\$1,975,000	\$17,489,000
Mercer	\$16,211,000	\$11,951,000	\$17,901,000	\$18,992,000	\$20,656,000	\$85,711,000	\$1,195,000	\$3,091,000	\$2,592,000	\$3,518,000	\$3,906,000	\$14,302,000
Miami	\$41,552,000	\$38,385,000	\$42,307,000	\$36,981,000	\$37,623,000	\$196,848,000	\$8,534,000	\$5,688,000	\$7,975,000	\$8,477,000	\$8,334,000	\$39,008,000
Monroe	\$3,691,000	\$10,175,000	\$5,358,000	\$6,806,000	\$8,850,000	\$34,880,000	\$1,825,000	\$4,037,000	\$1,620,000	\$1,520,000	\$440,000	\$9,442,000
Montgomery	\$208,438,000	\$214,823,000	\$208,080,000	\$207,793,000	\$204,262,000	\$1,043,396,000	\$29,744,000	\$41,193,000	\$31,341,000	\$36,076,000	\$39,349,000	\$177,703,000
Morgan	\$11,886,000	\$12,737,000	\$6,461,000	\$8,444,000	\$9,353,000	\$48,881,000	\$2,771,000	\$1,495,000	\$1,720,000	\$4,305,000	\$4,231,000	\$15,522,000
Morrow	\$14,931,000	\$24,535,000	\$19,398,000	\$19,938,000	\$22,988,000	\$99,790,000	\$2,460,000	\$7,952,000	\$3,386,000	\$1,811,000	\$4,364,000	\$19,973,000
Muskingum	\$45,145,000	\$39,093,000	\$51,064,000	\$43,671,000	\$35,304,000	\$214,277,000	\$4,821,000	\$6,359,000	\$11,093,000	\$9,730,000	\$5,878,000	\$37,881,000
Noble	\$9,686,000	\$9,047,000	\$5,860,000	\$7,061,000	\$5,474,000	\$37,128,000	\$1,563,000	\$1,482,000	\$2,847,000	\$1,606,000	\$2,528,000	\$10,026,000
Ottawa	\$15,704,000	\$30,111,000	\$21,297,000	\$12,057,000	\$28,289,000	\$127,458,000	\$3,399,000	\$6,352,000	\$8,873,000	\$8,458,000	\$7,26,000	\$22,808,000
Paulding	\$12,789,000	\$15,696,000	\$17,096,000	\$12,688,000	\$12,322,000	\$70,591,000	\$4,885,000	\$5,075,000	\$4,335,000	\$4,206,000	\$6,168,000	\$24,669,000
Perry	\$26,105,000	\$18,256,000	\$13,832,000	\$17,459,000	\$17,459,000	\$99						



TABLE A7. COMPREHENSIVE COSTS OF TRAFFIC CRASHES IN OHIO, 2001-2005

County	All Crashes					Alcohol-Related Crashes					Total 2001-2005	
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005		
Adams	\$48,433,000	\$63,953,000	\$42,133,000	\$67,861,000	\$60,674,000	\$283,054,000	\$19,854,000	\$23,609,000	\$10,849,000	\$7,843,000	\$14,176,000	\$76,831,000
Allen	\$140,883,000	\$155,917,000	\$154,332,000	\$109,435,000	\$145,332,000	\$706,549,000	\$12,451,000	\$38,279,000	\$15,375,000	\$13,886,000	\$36,209,000	\$116,200,000
Ashland	\$66,227,000	\$91,725,000	\$78,447,000	\$48,045,000	\$63,937,000	\$348,401,000	\$15,841,000	\$4,634,000	\$15,020,000	\$4,655,000	\$7,900,000	\$48,050,000
Ashtabula	\$169,946,000	\$149,297,000	\$133,203,000	\$157,399,000	\$171,144,000	\$780,989,000	\$62,448,000	\$36,646,000	\$39,920,000	\$47,713,000	\$56,300,000	\$243,027,000
Athens	\$77,071,000	\$48,613,000	\$76,291,000	\$76,053,000	\$76,087,000	\$354,115,000	\$20,458,000	\$16,695,000	\$24,827,000	\$25,271,000	\$19,779,000	\$107,030,000
Auglaize	\$72,120,000	\$68,109,000	\$42,749,000	\$72,618,000	\$46,922,000	\$302,518,000	\$7,261,000	\$9,931,000	\$2,563,000	\$22,418,000	\$5,681,000	\$47,854,000
Belmont	\$96,291,000	\$95,617,000	\$109,210,000	\$81,751,000	\$64,999,000	\$447,868,000	\$15,888,000	\$38,237,000	\$45,358,000	\$14,400,000	\$20,267,000	\$134,150,000
Brown	\$49,876,000	\$64,259,000	\$52,987,000	\$72,008,000	\$67,093,000	\$306,223,000	\$11,741,000	\$18,331,000	\$7,345,000	\$7,975,000	\$19,368,000	\$64,760,000
Butler	\$349,699,000	\$340,200,000	\$350,192,000	\$329,424,000	\$372,560,000	\$1,742,075,000	\$66,097,000	\$60,753,000	\$64,670,000	\$67,257,000	\$75,707,000	\$334,484,000
Carroll	\$29,406,000	\$29,901,000	\$35,569,000	\$27,159,000	\$30,592,000	\$152,627,000	\$10,628,000	\$6,035,000	\$2,292,000	\$6,071,000	\$5,090,000	\$30,116,000
Champaign	\$32,731,000	\$46,422,000	\$43,705,000	\$74,353,000	\$57,839,000	\$255,050,000	\$3,104,000	\$3,410,000	\$11,905,000	\$23,977,000	\$6,334,000	\$48,730,000
Clark	\$175,599,000	\$149,549,000	\$206,569,000	\$152,122,000	\$201,519,000	\$885,358,000	\$36,340,000	\$36,391,000	\$48,034,000	\$42,655,000	\$57,882,000	\$221,302,000
Clermont	\$249,458,000	\$217,567,000	\$243,181,000	\$253,091,000	\$234,365,000	\$1,197,662,000	\$43,695,000	\$37,851,000	\$48,755,000	\$44,874,000	\$32,462,000	\$208,637,000
Clinton	\$52,288,000	\$63,814,000	\$95,925,000	\$59,982,000	\$88,303,000	\$360,312,000	\$15,354,000	\$3,477,000	\$22,398,000	\$4,307,000	\$6,434,000	\$51,970,000
Columbiana	\$96,286,000	\$135,700,000	\$146,936,000	\$118,181,000	\$109,442,000	\$606,545,000	\$23,407,000	\$35,289,000	\$32,137,000	\$11,098,000	\$23,343,000	\$125,274,000
Coshocton	\$50,230,000	\$65,096,000	\$35,933,000	\$44,510,000	\$35,572,000	\$231,341,000	\$18,520,000	\$12,527,000	\$2,570,000	\$6,669,000	\$10,947,000	\$51,233,000
Crawford	\$64,000,000	\$51,687,000	\$39,729,000	\$46,665,000	\$45,531,000	\$247,612,000	\$23,113,000	\$13,384,000	\$6,497,000	\$6,423,000	\$9,640,000	\$59,057,000
Cuyahoga	\$1,003,936,000	\$957,362,000	\$971,853,000	\$975,325,000	\$848,104,000	\$4,756,580,000	\$111,219,000	\$185,829,000	\$195,307,000	\$200,763,000	\$130,423,000	\$823,541,000
Darke	\$63,838,000	\$63,437,000	\$69,835,000	\$80,199,000	\$68,509,000	\$345,818,000	\$10,284,000	\$12,205,000	\$19,212,000	\$14,688,000	\$27,673,000	\$84,062,000
Defiance	\$88,902,000	\$61,526,000	\$46,525,000	\$42,743,000	\$52,929,000	\$292,625,000	\$22,906,000	\$4,028,000	\$14,016,000	\$15,095,000	\$14,137,000	\$73,182,000
Delaware	\$126,054,000	\$127,783,000	\$147,642,000	\$149,793,000	\$142,960,000	\$694,232,000	\$15,292,000	\$23,608,000	\$18,139,000	\$30,233,000	\$39,531,000	\$126,803,000
Erle	\$95,305,000	\$106,872,000	\$99,638,000	\$94,043,000	\$97,401,000	\$487,059,000	\$21,622,000	\$21,832,000	\$21,858,000	\$12,828,000	\$10,805,000	\$88,445,000
Fairfield	\$123,342,000	\$137,933,000	\$148,468,000	\$141,772,000	\$159,401,000	\$710,916,000	\$21,795,000	\$34,479,000	\$22,225,000	\$39,026,000	\$34,782,000	\$152,307,000
Fayette	\$44,147,000	\$62,734,000	\$39,855,000	\$30,404,000	\$43,542,000	\$220,682,000	\$17,833,000	\$10,678,000	\$15,720,000	\$6,499,000	\$9,872,000	\$60,602,000
Franklin	\$1,112,224,000	\$1,091,872,000	\$1,042,836,000	\$1,031,744,000	\$995,767,000	\$5,274,443,000	\$110,849,000	\$166,643,000	\$175,620,000	\$133,687,000	\$135,479,000	\$722,278,000
Fulton	\$64,345,000	\$90,425,000	\$79,259,000	\$70,949,000	\$90,509,000	\$395,487,000	\$8,565,000	\$23,624,000	\$22,950,000	\$22,450,000	\$19,431,000	\$97,020,000
Gallia	\$47,697,000	\$62,478,000	\$50,974,000	\$36,483,000	\$45,451,000	\$231,299,000	\$16,519,000	\$18,071,000	\$15,725,000	\$6,940,000	\$6,945,000	\$63,855,000
Geauga	\$108,344,000	\$108,043,000	\$102,959,000	\$114,587,000	\$92,521,000	\$526,454,000	\$22,402,000	\$18,214,000	\$15,621,000	\$37,845,000	\$18,335,000	\$112,417,000
Greene	\$118,003,000	\$165,169,000	\$193,279,000	\$165,316,000	\$198,209,000	\$839,976,000	\$22,922,000	\$30,894,000	\$26,357,000	\$44,613,000	\$65,651,000	\$189,437,000
Guernsey	\$52,993,000	\$64,059,000	\$42,731,000	\$58,167,000	\$75,206,000	\$293,156,000	\$8,389,000	\$8,168,000	\$12,211,000	\$14,628,000	\$27,404,000	\$70,800,000
Hamilton	\$76,136,000	\$846,257,000	\$827,726,000	\$808,023,000	\$726,625,000	\$3,974,767,000	\$102,241,000	\$146,959,000	\$155,583,000	\$148,373,000	\$121,003,000	\$674,159,000
Hancock	\$86,834,000	\$94,058,000	\$87,029,000	\$100,153,000	\$81,571,000	\$449,645,000	\$25,054,000	\$19,185,000	\$20,170,000	\$13,508,000	\$5,098,000	\$83,015,000
Hardin	\$30,308,000	\$73,999,000	\$43,021,000	\$42,435,000	\$36,545,000	\$228,308,000	\$6,336,000	\$13,686,000	\$13,847,000	\$19,686,000	\$7,203,000	\$70,233,000
Harrison	\$27,953,000	\$28,416,000	\$23,587,000	\$36,143,000	\$28,426,000	\$144,525,000	\$1,361,000	\$9,195,000	\$963,000	\$5,626,000	\$9,673,000	\$26,818,000
Henry	\$63,601,000	\$96,083,000	\$59,203,000	\$51,157,000	\$60,662,000	\$330,706,000	\$15,999,000	\$22,872,000	\$8,490,000	\$18,617,000	\$5,356,000	\$71,334,000
Highland	\$52,883,000	\$51,968,000	\$63,947,000	\$49,203,000	\$67,697,000	\$286,698,000	\$6,866,000	\$14,533,000	\$11,371,000	\$14,373,000	\$19,448,000	\$66,591,000
Hocking	\$29,185,000	\$45,361,000	\$60,389,000	\$32,701,000	\$36,387,000	\$204,023,000	\$2,276,000	\$16,900,000	\$22,055,000	\$7,087,000	\$14,701,000	\$63,019,000
Holmes	\$60,293,000	\$43,769,000	\$45,120,000	\$42,509,000	\$32,088,000	\$223,779,000	\$10,433,000	\$9,772,000	\$8,703,000	\$6,335,000	\$5,557,000	\$40,799,000
Huron	\$77,364,000	\$69,486,000	\$86,312,000	\$74,451,000	\$88,974,000	\$396,587,000	\$7,349,000	\$15,681,000	\$14,828,000	\$11,095,000	\$22,793,000	\$71,746,000
Jackson	\$62,601,000	\$62,081,000	\$43,191,000	\$49,102,000	\$70,335,000	\$287,310,000	\$22,556,000	\$16,236,000	\$15,972,000	\$8,969,000	\$10,867,000	\$74,600,000
Jefferson	\$86,954,000	\$74,634,000	\$53,155,000	\$69,151,000	\$74,219,000	\$358,113,000	\$18,139,000	\$21,551,000	\$8,901,000	\$12,956,000	\$9,199,000	\$70,746,000
Knox	\$71,765,000	\$65,362,000	\$67,693,000	\$56,943,000	\$90,678,000	\$352,441,000	\$11,735,000	\$19,703,000	\$7,656,000	\$12,174,000	\$15,597,000	\$66,865,000
Lake	\$160,384,000	\$177,712,000	\$177,009,000	\$130,923,000	\$153,558,000	\$799,586,000	\$25,284,000	\$40,314,000	\$35,921,000	\$22,144,000	\$48,815,000	\$167,480,000
Lawrence	\$50,120,000	\$83,848,000	\$71,576,000	\$72,440,000	\$69,374,000	\$347,358,000	\$5,406,000	\$28,055,000	\$11,623,000	\$18,601,000	\$13,935,000	\$77,620,000
Licking	\$185,061,000	\$193,633,000	\$165,630,000	\$197,672,000	\$206,234,000	\$948,230,000	\$31,987,000	\$47,410,000	\$32,128,000	\$49,833,000	\$50,291,000	\$216,649,000
Logan	\$67,501,000	\$88,981,000	\$60,328,000	\$76,415,000	\$62,487,000	\$355,712,000	\$18,515,000	\$15,645,000	\$2,415,000	\$15,475,000	\$23,281,000	\$91,250,000
Lorain	\$277,608,000	\$266,757,000	\$241,467,000	\$236,176,000	\$217,439,000	\$1,239,447,000	\$63,727,000	\$67,250,000	\$41,302,000	\$47,395,000	\$32,628,000	\$252,302,000
Lucas	\$535,499,000	\$519,467,000	\$469,284,000	\$486,385,000	\$552,461,000	\$2,563,096,000	\$59,427,000	\$85,217,000	\$79,096,000	\$68,504,000	\$114,105,000	\$406,349,000
Madison	\$53,050,000	\$69,902,000	\$48,886,000	\$79,992,000	\$89,590,000	\$341,420,000	\$7,713,000	\$15,712,000	\$6,286,000	\$19,261,000	\$24,806,000	\$73,778,000
Mahoning	\$253,025,000	\$311,728,000	\$231,556,000	\$310,747,000	\$271,261,000	\$1,378,317,000	\$41,135,000	\$59,492,000	\$40,178,000	\$83,807,000	\$75,641,000	\$300,253,000
Marion	\$93,512,000	\$72,624,000	\$79,955,000	\$79,062,000	\$56,547,000	\$381,700,000	\$12,097,000	\$13,341,000	\$26,689,000	\$10,377,000	\$7,707,000	\$72,211,000
Medina	\$135,761,000	\$179,858,000	\$135,425,000	\$159,262,000	\$135,639,000	\$745,945,000	\$23,598,000	\$40,037,000	\$30,070,000	\$50,976,000	\$21,693,000	\$170,424,000
Meigs	\$40,078,000	\$50,721,000	\$30,459,000	\$29,709,000	\$37,874,000	\$188,841,000	\$6,450,000	\$18,598,000	\$13,411,000	\$11,023,000	\$6,181,000	\$55,663,000
Mercer	\$45,730,000	\$30,909,000	\$50,644,000	\$54,881,000	\$60,498,000	\$242,662,000	\$3,315,000	\$9,314,000	\$7,609,000	\$10,803,000	\$12,177,000	\$43,218,000
Miami	\$113,140,000	\$102,507,000	\$117,421,000	\$99,457,000	\$103,799,000	\$536,324,000	\$26,691,000	\$17,308,000	\$24,909,000	\$26,685,000	\$26,280,000	\$121,873,000
Monroe	\$10,207,000	\$31,239,000	\$15,193,000	\$20,117,000	\$27,077,000	\$103,833,000	\$5,825,000	\$13,124,000	\$5,105,000	\$4,748,000	\$1,260,000	\$30,062,000
Montgomery	\$557,064,000	\$579,058,000	\$557,512,000	\$559,432,000	\$558,371,000	\$2,811,437,000	\$90,857,000	\$128,859,000	\$96,789,000	\$112,821,000	\$123,362,000	\$552,688,000
Morgan	\$35,60											

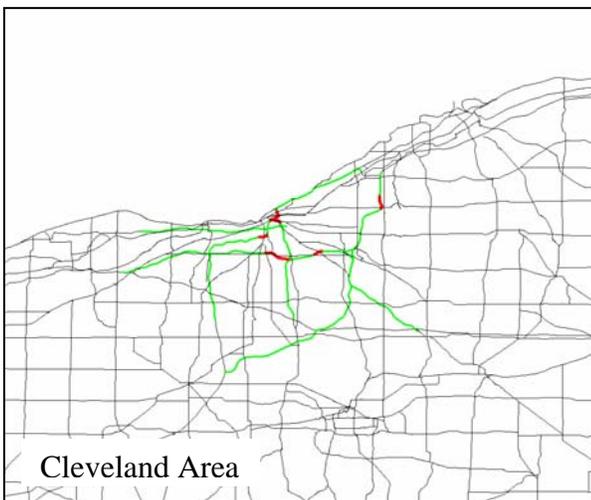
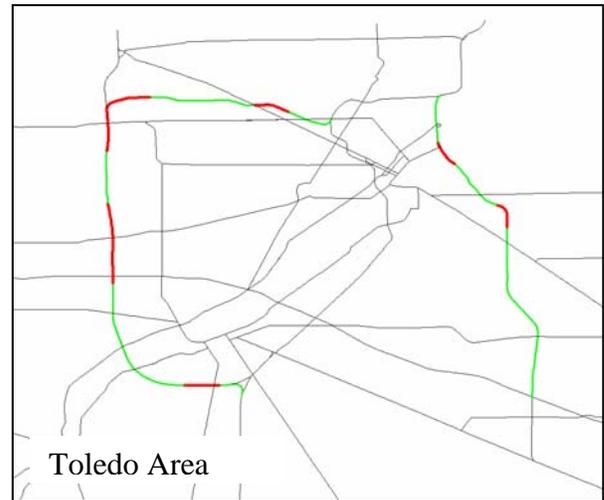
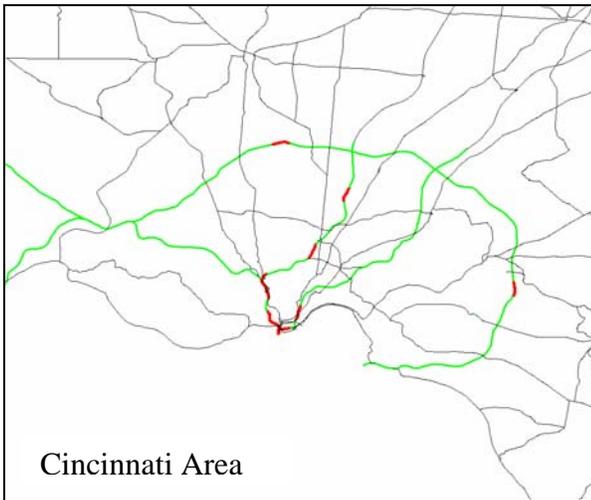
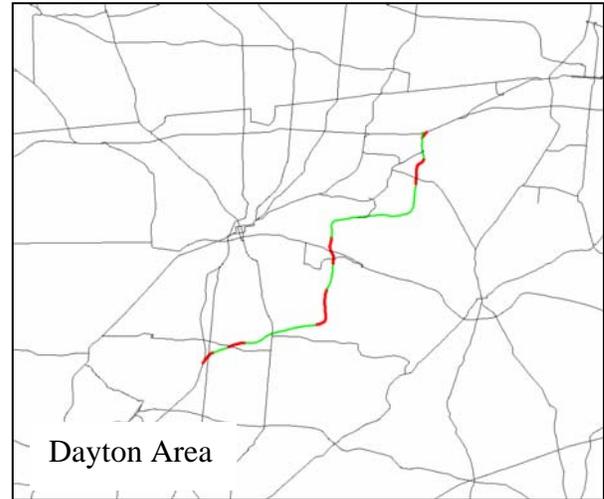
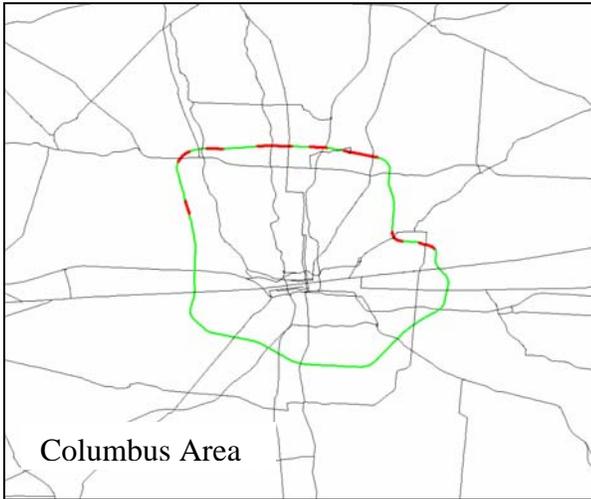


**APPENDIX B**

**OHIO METROPOLITAN  
TRAFFIC CRASH FORECASTS**



**TOP 10 ROAD SEGMENTS FOR ALCOHOL-RELATED FATAL AND INJURY CRASHES ON SELECT METROPOLITAN ROADWAYS**





## REFERENCES

- <sup>1</sup> Subramanian, R (2006). "Motor Vehicle Traffic Crashes as a Leading Cause of Death in the United States, 2003." Washington, DC: NHTSA. *Traffic Safety Facts: Research Note DOT HS 810 568*.
- <sup>2</sup> Department of Justice, Federal Bureau of Investigation (2005). *Crime in the United States 2004: Uniform Crime Reports*. Washington, DC: FBI.
- <sup>3</sup> Quinlan K, Brewer R, Siegel P, Sleet D, Mokdad A, Shults R, Flowers N (2005). "Alcohol-Impaired Driving among U.S. adults, 1993-2002." *American Journal of Preventive Medicine*. 28(4):345-350.
- <sup>4</sup> Levitt S and Porter J (2001). "How Dangerous Are Drinking Drivers." *Journal of Political Economy*. 109(6).
- <sup>5</sup> National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (2001). *Injury Fact Book, 2001-2002*. Atlanta, GA: CDC. Citing a report from the National Highway Traffic Safety Administration.
- <sup>6</sup> Taylor D, Miller T, and Cox K (2002). *Impaired Driving in the United States*. Pacific Institute for Research and Evaluation. Produced under contract DTNHZZ-98-D35079.
- <sup>7</sup> Levitt and Porter (Ibid.).
- <sup>8</sup> Ohio Insurance Institute (2006). *2005 Ohio Insurance Facts*. Data for Ohio OVI Convictions was obtained from the Ohio Department of Public Safety, Bureau of Motor Vehicles (as of August 23, 2005).
- <sup>9</sup> Ohio Insurance Institute (Ibid.).
- <sup>10</sup> National Safety Council (2004). *Estimating the Costs of Unintentional Injuries, 2004*. Available from URL: [www.nsc.org/lrs/statinfo/estcost.htm](http://www.nsc.org/lrs/statinfo/estcost.htm).
- <sup>11</sup> Taylor et al. (Ibid.).
- <sup>12</sup> United States Department of Transportation, Federal Highway Administration (1994). *Technical Advisory T75702: Motor Vehicle Accident Costs*. Washington, DC: FHWA. Available from URL: [www.fhwa.dot.gov/](http://www.fhwa.dot.gov/)
- <sup>13</sup> Elder R, Schults R, Sleet D, Nichols J, Zaza S, and Thompson R (2002). "Effectiveness of Sobriety Checkpoints for Reducing Alcohol-Involved Crashes." *Traffic Injury Prevention*. 3:266-74.
- <sup>14</sup> Wagenaar A, Zobel T, Williams G, Hingson, R (2000). *Effects of DWI Control Efforts: A Systematic Review of the Literature from 1960-1991*. Minneapolis, MN: University of Minnesota, School of Public Health.
- <sup>15</sup> National Safety Council (Ibid.).
- <sup>16</sup> National Safety Council (Ibid.).
- <sup>17</sup> United States Department of Transportation, Federal Highway Administration (Ibid.).
- <sup>18</sup> National Safety Council (Ibid.).
- <sup>19</sup> Governor's Task Force on Impaired Driving (2003). *Report and Recommendations on Ways to Impact Impaired Driving in Ohio*.
- <sup>20</sup> Department of Transportation, National Highway Traffic Safety Administration (2001). *Alcohol and Highway Safety 2001: A Review of the State of Knowledge*. Washington DC: NHTSA. Produced under contract DOT HS 809 383
- <sup>21</sup> Jones, R and Lacey, J (1991). *Review of the literature evaluating the effect of countermeasures to reduce alcohol impaired driving (1980-1989): Volume I and II*. Washington, DC: NHTSA. Produced under contract DOT HS 808 023.
- <sup>22</sup> Elder et al. (Ibid.).
- <sup>23</sup> Holloman, C (2006). *Predicting Crashes and Crash Causes on the Ohio Sub-Metro Roadways*. The Ohio State University Statistical Consulting Service. Columbus, OH.