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July, 2004

The *Traffic Engineering Division* maintains traffic crash files, by location, for all reported crashes in the City of Madison. The Division began computerizing crash data in 1984, in 2001 the Division began using GIS to map pedestrian, bicycle and motor vehicle crashes to aid in identifying high crash locations. This database is derived from reports that were filed with the *Madison Police Department*.

Computerization of the crash data has improved our ability to identify high crash locations for further study and has allowed us to obtain information and statistics regarding crashes that were previously not available. For example, analyses of types of crashes, driver factors in crashes, and the frequency of alcohol-related crashes can now be made for a particular type of location citywide, such as all signalized intersections, all non-intersection locations, or any individual location.

This citywide data provides a basis for comparing and identifying unusual crash patterns, driver factors, or violations. This information helps traffic safety officials identify crash problems that may be mitigated by traffic control changes, geometric improvements, traffic safety educational efforts, or law enforcement activities. We call this the *3E Process* (**E**ngineering / **E**ducation / **E**nforcement).

Traffic crash data helps the *Traffic Engineering Division* to identify and submit funding applications for traffic improvements and reconstruction projects through the *Federal Hazard Elimination Program*. Under this program, 90 percent of the approved construction project costs are paid by Federal funds.

SPECIFIC TRAFFIC SAFETY PRIORITIES IN MADISON:

Our continuing annual traffic crash reduction studies support the need for the following:

- To devote resources to traffic engineering studies of high crash locations and trends, and to develop and implement appropriate countermeasures.
- To expand educational and promotional efforts to increase safety belt usage. Statewide data illustrates increased safety belt usage minimizes injuries.
- To expand educational and promotional efforts to increase compliance with traffic control devices and traffic laws designed to enhance conditions for pedestrians.
- To expand efforts to reduce the number of traffic crashes and injuries involving drivers under the influence of alcohol and drugs; and

- To develop proactive selective traffic law enforcement and education programs that are designed to reduce crashes due to speeding or other violations of traffic control devices, such as traffic signals.

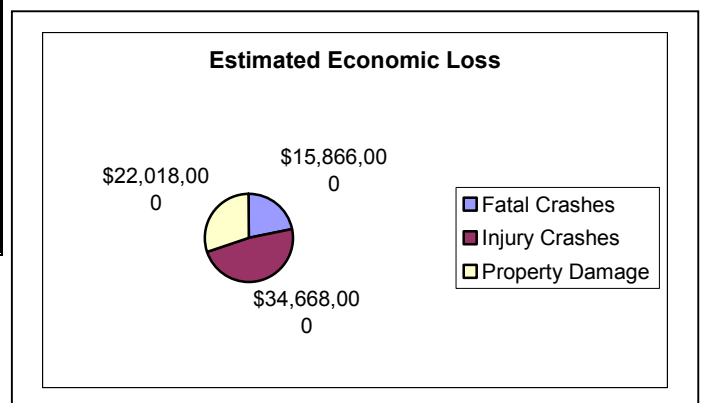
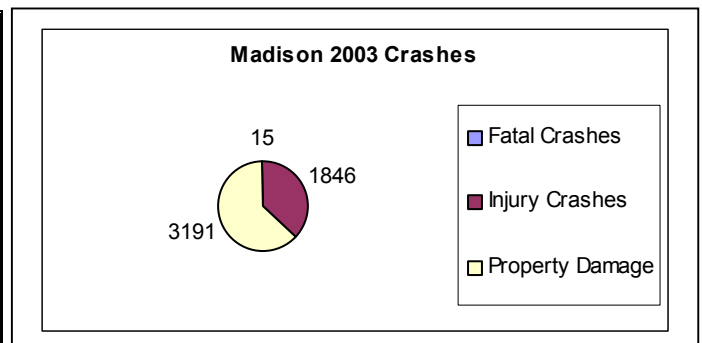
This report contains statistics and graphics of the 2003 crash data. It includes citywide statistics of intersection and non-intersection crashes; with the highest numbers of crashes and the corresponding crash rates. Statistics for pedestrian, bicycle, motorcycle and moped crashes are also provided.

The intersection with the highest crash frequency in 2003 was the median break at 600 S Whitney Way. This location had 24 reported crashes, the highest among intersections in the City.

Citywide in 2003, there were 5,052 reported crashes on public streets: 1,967 occurred at intersections, and 3,085 occurred at non-intersection street locations. These crashes included 1,846 injury crashes and 15 fatal crashes that resulted in 2,513 injuries and 15 fatalities. These crashes resulted in a total economic loss of over \$72 million for 2003.

The table and graphs below are summaries in the City of Madison for 2003.

2003 - Total Crashes	
Number of Crashes	5052
Number of Injury Crashes	1846
Number of Injuries (Total)	2513
Incapacitating	148
Non-Incapacitating	611
Possible	1754
Number of Fatal Crashes	15
Number of Fatalities	15
Economic Loss:	
Property Damage	\$22,018,000
Injury Crashes	\$34,668,000
Fatal Crashes	\$15,866,000
Total	\$72,552,000



Economic loss measures the productivity lost and expenses incurred due to traffic crashes. There are five economic cost components:

- Wage and productivity losses, which include wages, fringe benefits, household production, and travel delay.
- Medical expenses including emergency services cost.
- Administrative expenses, which include the administrative cost of private and public insurance plus police and legal costs.
- Motor vehicle damage including the value of damage to property.
- Employer costs for crashes for workers.

Factors using 2002 National Safety Council figures plus 1.22% to account for inflation are \$1,057,700 per fatality, \$50,700 for incapacitating injury, \$16,900 for non-incapacitating injury, \$9,600 for possible injury and \$6,900 for crashes with property damage.

A five-year history of the number and severity of crashes reported on public streets (excluding private property crashes) in Madison is as follows:

TOTAL	1999	2000	2001	2002	2003	5-Year Average
Number of crashes	4,576	5,359	4,707	4,859	5,052	4910.6
Number of injury crashes	1,852	2,031	1,820	1,817	1,846	1873.2
Number of injuries	2,411	2,872	2,552	2,576	2,513	2584.8
Number of fatal crashes	4	12	6	12	15	9.8
Number of fatalities	4	12	7	16	15	10.8
INTERSECTION CRASHES						
Number of crashes	1,644	1,907	1,761	1,920	1,967	1839.8
Number of injury crashes	723	794	753	796	791	771.4
Number of injuries	1,078	1,127	1,053	1,161	1,106	1105.0
Number of fatal crashes	2	2	0	4	6	2.8
Number of fatalities	2	2	0	6	6	3.2
NON-INTERSECTION CRASHES						
Number of crashes	2,931	3,452	2,946	2,939	3,085	3070.6
Number of injury crashes	1,086	1,237	1,067	1,021	1,055	1093.2
Number of injuries	1,555	1,745	1,499	1,415	1,407	1524.2
Number of fatal crashes	2	10	6	8	9	7.0
Number of fatalities	2	10	7	10	9	7.6
PEDESTRIAN CRASHES						
Number of crashes	102	111	109	92	97	102.2
Number of injury crashes	100	107	102	89	92	98.0
Number of injuries	112	113	126	99	102	110.4
Number of fatal crashes	0	2	3	1	2	1.6
Number of fatalities	0	2	3	1	2	1.6
BICYCLE CRASHES						
Number of crashes	103	111	112	93	95	102.8
Number of injury crashes	99	109	112	91	91	100.4
Number of injuries	99	110	112	92	91	100.8
Number of fatal crashes	0	1	0	1	0	0.4
Number of fatalities	0	1	0	1	0	0.4

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