

**AN ANALYSIS OF VEHICLE PURSUITS IN THE  
MILWAUKEE POLICE DEPARTMENT,  
2002 TO 2009**



**REPORT OF THE  
FIRE AND POLICE COMMISSION**

July 7, 2010

Kristin Kappelman  
Research and Policy Analyst

200 East Wells Street  
City Hall, Room 706A  
Milwaukee, WI 53202  
(414) 286-5000

Website: <http://www.milwaukee.gov/fpc>

## INTRODUCTION

Law enforcement officers are often required to make decisions quickly in precarious situations, and these decisions must reflect an officer's obligation to protect and serve the community-at-large. Police pursuit driving is a prime example of this decision-making dilemma, as it presents the opportunity to apprehend a suspect, while also presenting the possibility of endangering the lives of the officers and general public. Law enforcement personnel must find a reasonable balance that weighs the potential of apprehending a suspect against the potential for personal injury and property damage.

Past research has indicated that nationwide, approximately 40% of all pursuits resulted in an accident (Dunham, Alpert, Kenny, & Cromwell, 1998 and Schultz, Hudak, & Alpert, 2009). Roughly 50% of all pursuit collisions occurred in the first 2 minutes of the pursuit and more than 70% of all collisions transpired before the sixth minute of the pursuit (Hill, 2002). Injuries happened in 20% of all pursuits (Dunham, et al., 1998), with third-party individuals not involved in the pursuit constituting 42% of people injured or killed in pursuits (Schultz, Hudak, & Alpert, 2010). On average, 1 person dies every day in the United States as a result of a police pursuit (Schultz, Hudak, & Alpert, 2010). Approximately 1% of all pursuits or 1 out of 100 high-speed pursuits resulted in a fatality (Dunham, et al., 1998 and Schultz, Hudak, & Alpert, 2010), with 1 law enforcement officer dying every 11 weeks in a pursuit and approximately 1% of all line of duty deaths occurring in a vehicle pursuit (Schultz, Hudak, & Alpert, 2010). Approximately 44% of pursuits resulted from a stop for a traffic violation, while 39% resulted from a felony (e.g., armed robbery, vehicular assault, stolen vehicle) (Alpert, 1997). Law enforcement personnel made the decision to terminate a pursuit in 4.7% of pursuits (Schultz, Hudak, & Alpert, 2009), while 75% of pursuits resulted in the capture of a suspect (Dunham et al., 1998).

Police pursuit driving is a hazardous, but on occasion, necessary, public safety activity. This report is a review of all police pursuits performed by the Milwaukee Police Department (MPD) from

January 1, 2002 to December 31, 2009<sup>1</sup>. This eight-year review will serve as a baseline to determine the frequency and circumstances surrounding vehicle pursuits. This initial report does not address the impact of specific policies or procedures followed by MPD during the reporting period. This analysis will provide data to conduct future reviews of MPD policy, procedures, and training.

#### REVIEW OF MILWAUKEE POLICE DEPARTMENT PURSUITS, 2002 to 2009

MPD officers participated in 1,688 vehicle pursuits between 2002<sup>2</sup> and 2009 (see Table 1). The highest number of pursuits occurred in 2002, with 271 vehicle pursuits (16.1%). The fewest number of vehicle pursuits occurred in 2009, with 165 pursuits (9.8%). Vehicle pursuits decreased by 106 (39.1%) between 2002 and 2009.

Table 1. Vehicle Pursuits by Year

<b>Year</b>	<b>Number of Pursuits</b>	<b>Percentage</b>
<b>2002</b>	271	16.1%
<b>2003</b>	232	13.7%
<b>2004</b>	205	12.1%
<b>2005</b>	200	11.8%
<b>2006</b>	228	13.5%
<b>2007</b>	212	12.6%
<b>2008</b>	175	10.4%
<b>2009</b>	165	9.8%
<b>Total</b>	<b>1688</b>	<b>100.0%</b>

During the eight-year period covering 2002 to 2009, November, with 155 pursuits (9.2%), was the month with the highest cumulative pursuit total, while September, with 118 pursuits (7.0%), had the lowest cumulative pursuit total (see Table 2). There is no discernable pattern related to the number of vehicle pursuits with regards to month.

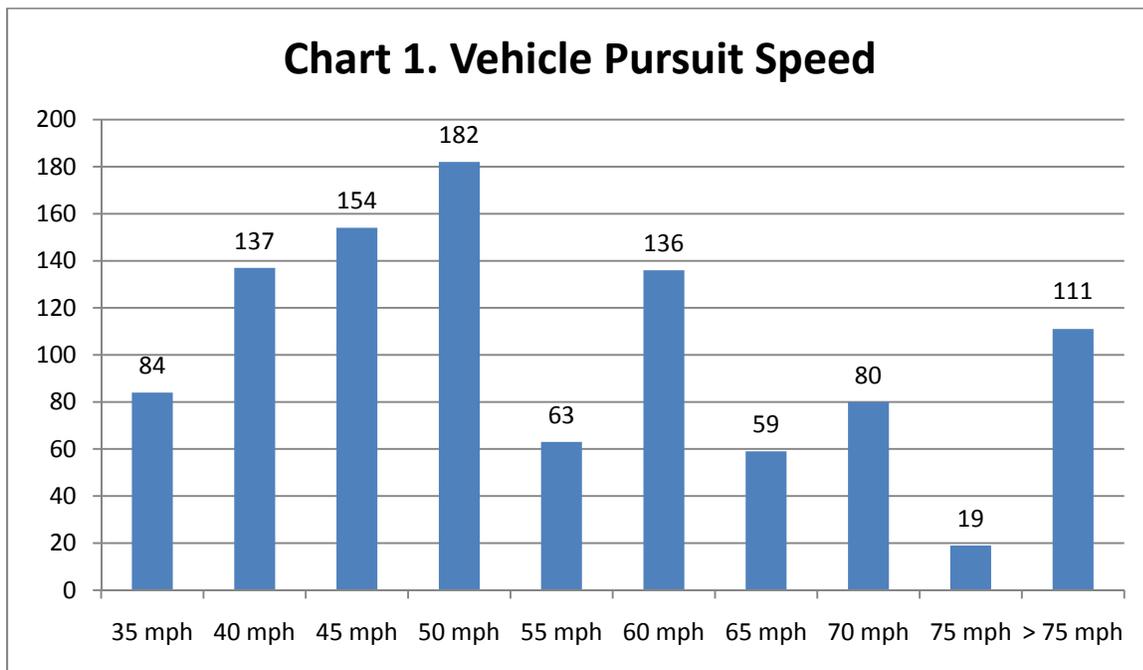
<sup>1</sup> Data for this report were obtained from the MPD AIM system, which was then converted to SPSS for analysis.

<sup>2</sup> 2002 is the first year that vehicle pursuit data has been stored electronically; however, reports filed from 2008 forward are more complete and contain more detailed information than the previous years. For this reason, many of the variables will have missing data.

Table 2. Cumulative Vehicle Pursuits by Month, 2002 to 2009

Month	Number of Pursuits	Percentage
January	145	8.6%
February	129	7.6%
March	154	9.1%
April	145	8.6%
May	134	7.9%
June	131	7.8%
July	147	8.7%
August	148	8.8%
September	118	7.0%
October	148	8.8%
November	155	9.2%
December	134	7.9%
<b>Total</b>	<b>1688</b>	<b>100.0%</b>

Maximum speed reached during the pursuits ranged from 35 miles per hour to speeds greater than 75 miles per hour (see Chart 1). The most common maximum speed reached was 50 miles per hour (182 pursuits, 17.8%). The average maximum speed reached was 55 miles per hour, with a median (the middle value) of 50 miles per hour.



Note: 663 missing cases.

The distance covered during the pursuit ranged from one quarter of a mile to over five miles (see Table 3). The most frequent distance traveled was 1 to 2 miles, with 243 pursuits (27.3%). The least frequent distance traveled was over 5 miles, with 62 pursuits (7.0%). The average distance traveled during a pursuit was 1.7 miles, with a median of 1 mile.

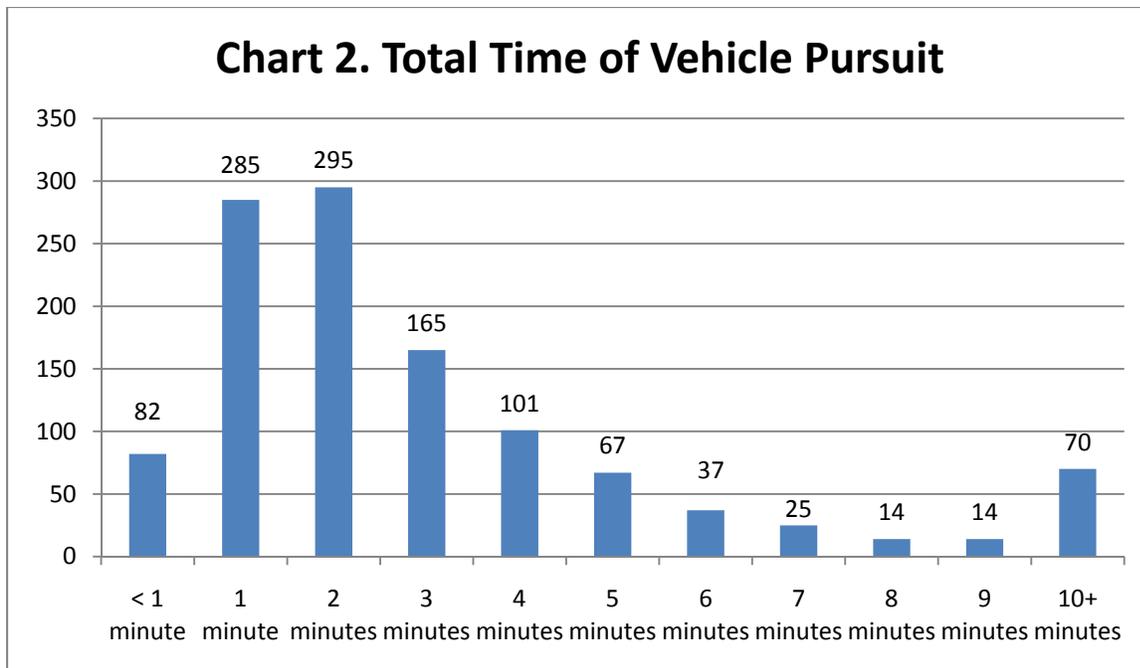
Table 3. Vehicle Pursuit Distance

<b>Distance</b>	<b>Number of Pursuits</b>	<b>Percentage</b>
<b>¼ mile</b>	93	10.5%
<b>½ mile</b>	138	15.5%
<b>¾ mile</b>	82	9.2%
<b>1 mile</b>	146	16.4%
<b>1 to 2 miles</b>	243	27.3%
<b>3 to 5 miles</b>	125	14.1%
<b>Over 5 miles</b>	62	7.0%
<b>Total</b>	<b>889</b>	<b>100.0%</b>

Note: 799 missing cases.

The amount of time<sup>3</sup> spent on a vehicle pursuit ranged from 0 minutes (indicating that the pursuit ended in less than 60 seconds) to 365 minutes (6 hours, 5 minutes) (see Chart 2). The average length of a pursuit was 4 minutes. The majority of pursuits lasted either 1 minute (285 pursuits, 24.7%) or 2 minutes (295 pursuits, 25.5%).

<sup>3</sup> The ending time of the vehicle pursuit indicates the time when the suspect was apprehended or the pursuit was terminated by the officer.



Note: 550 missing cases.

The majority of pursuits had a marked squad (802 pursuits, 81.3%) as the primary vehicle in the pursuit, followed by an unmarked squad (161 pursuits, 16.3%)<sup>4</sup>. Other vehicles listed as the primary vehicle include: undercover car (8 pursuits, 0.8%), motorcycle (7 pursuits, 0.7%), patrol wagon (6 pursuits, 0.6%), and other vehicle (2 pursuits, 0.1%). Almost all of the primary vehicles involved in the pursuit used emergency lights and sirens during the pursuit (1,158 vehicles, 99.2%), while 9 vehicles (0.8%) did not<sup>5</sup>.

The majority of pursuits were initiated as the result of a traffic violation (660 pursuits, 62.9%), followed by the commission of a felony (274 pursuits, 26.1%) (see Table 4). Other reasons for initiating

<sup>4</sup> Note: 702 missing cases.

<sup>5</sup> Note: 521 missing cases. According to MPD Standard Operating Procedure 660-Vehicle Pursuits, officers do not have to use emergency lights and sirens when obtaining evidence of a speed violation or when responding to a call which the officer reasonably believes a felony is in progress and the officer reasonably believes that knowledge of the officer's presence may endanger the safety of another person, cause the suspected violator to evade apprehension, cause the suspect to destroy evidence, or cause the suspect to cease the commission of a suspected felony.

the vehicle pursuit (115 pursuits, 11.0%) include commission of a misdemeanor, ordinance violation, and assisting other law enforcement agency.

Table 4. Reason for Pursuit

Reason for Pursuit	Number of Pursuits	Percentage
Traffic Violation	660	62.9%
Commission of a Felony	274	26.1%
Commission of a Misdemeanor	41	3.9%
Ordinance Violation	35	3.3%
Assisting Other Law Enforcement Agency	6	0.6%
Other	33	3.2%
<b>Total</b>	<b>812</b>	<b>100.0%</b>

Note: 679 missing cases.

Most pursuits were stopped by actions of the suspect being pursued: 245 pursuits (46.4%) ended because the suspect stopped and 186 pursuits (35.2%) ended because the suspect crashed (see Table 5). The suspect escaped apprehension in 33 pursuits (6.3%), while law enforcement terminated 24 pursuits (4.5%) after they were initiated.

Table 5. Vehicle Pursuit Outcomes

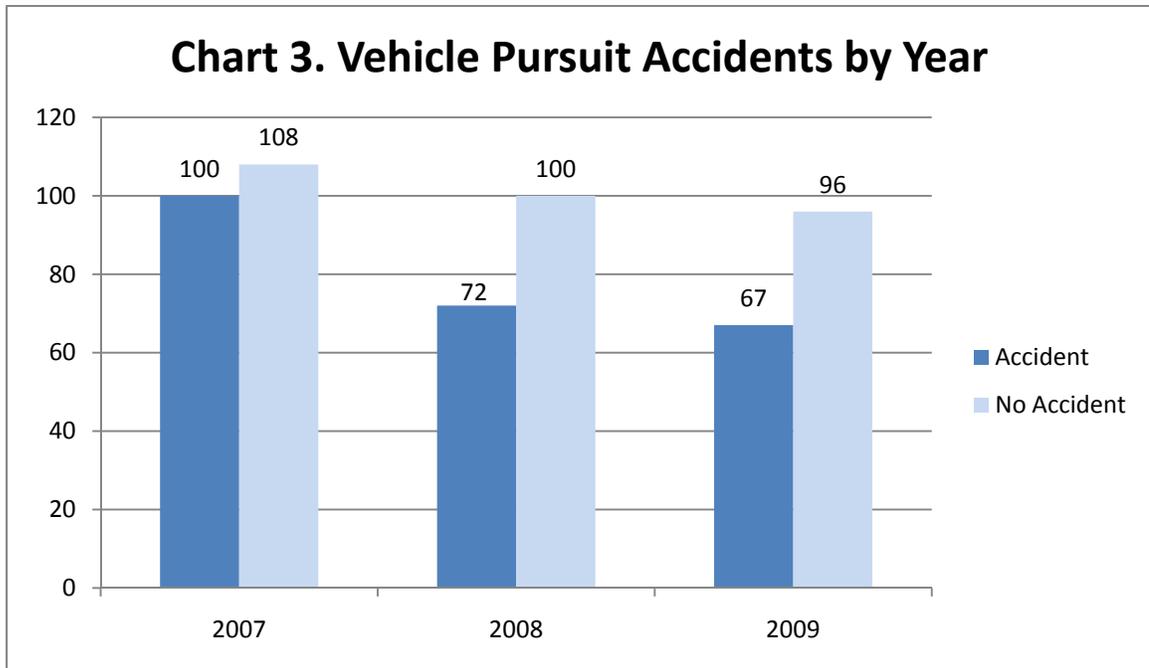
Outcome	Number of Pursuits	Percentage
Suspect stopped	245	46.4%
Suspect crashed	186	35.2%
Suspect escaped	33	6.3%
Pursuit terminated by law enforcement	24	4.5%
Suspect vehicle failed	18	3.4%
Other	22	4.2%
<b>Total</b>	<b>528</b>	<b>100.0%</b>

Note: 1160 missing cases.

Between 2007 and 2009<sup>6</sup>, 239 vehicle pursuits (44.0%) resulted in a vehicular accident, while 304 (56.0%) did not (see Chart 3). In 2007, 100 vehicle pursuits (47.2%) resulted in an accident.

<sup>6</sup> Due to the number of vehicle pursuit reports with missing data between 2002 and 2006, those years are not counted in the accident totals reported here. For example, 85 vehicle pursuit reports indicated that an accident occurred in 2002, but 186 reports gave no indication as to whether an accident occurred or not. By including the

However, the number of accidents decreased in 2008 and 2009, to 72 and 67, respectively. The number of vehicle pursuits that resulted in an accident decreased by 33% between 2007 and 2009.



Note: 9 missing cases.

Pursuits that resulted in traffic accidents involved property damage (256 accidents, 57.8%), personal injury (95 accidents, 21.4%), the department vehicle received damage (71 accidents, 16.0%), or other (20 accidents, 4.5%)<sup>7</sup>. Fatalities occurred in three vehicle pursuits (0.2%).

### Officer Demographics<sup>8</sup>

The majority of MPD employees involved in the pursuits as the driver of the department vehicle were male (1,570 officers, 93.5%), while 110 officers (6.5%) were female<sup>9</sup>. The ages of employees

---

85 reports in which an accident occurred and counting the 186 reports as missing data, the percentage of vehicle pursuits with an accident would be much higher than is accurate. At the same time, it cannot be assumed that all 186 vehicle pursuit reports from 2002 did not have an accident. So, in order to give a more accurate representation of the number of vehicle pursuits with an accident, only 2007 to 2009 are included.

<sup>7</sup> Note: 1245 missing cases.

<sup>8</sup> Information on officer demographics will focus solely on the primary pursuit vehicle and will not include any information on officers involved in the secondary pursuit vehicle.

involved in vehicle pursuits ranged from 22 to 62<sup>10</sup>. The mode, or most common age, was 39 years old, and the average age of employees was 38 years old. The number of years of service for employees involved in vehicle pursuits ranged from less than one year to 40 years<sup>11</sup>. The mode was 7 years of service, with an average of 11 years of service.

The majority of MPD employees involved in the pursuits were White (1,263 officers, 75.2%). A total of 187 employees (11.1%) were Hispanic, and 181 employees (10.8%) were Black. American-Indian employees were involved in 30 pursuits (1.8%), followed by Asian employees, with 19 pursuits (1.1%)<sup>12</sup>.

Over 80 percent of MPD employees involved in pursuits were at the rank of Police Officer (1,316 employees, 81.3%). Sergeant (169 employees, 10.4%) and Detective (104 employees, 6.4%) were the next most common ranks. Other ranks, such as Captain, Lieutenant, Identification Technician, etc, were involved in 29 pursuits (1.8%)<sup>13</sup>.

Twenty-four officers (4.4%) were injured during the vehicle pursuit, while 516 (95.6%) were not<sup>14</sup>. No MPD law enforcement personnel were killed as the result of a vehicle pursuit during this reporting period.

### **Suspect Demographics<sup>15</sup>**

The race and gender of the suspect(s) involved in the vehicle pursuits was missing or listed as unknown in the vast majority of pursuits. Of the pursuits where the race of the suspect was available, Black suspects were involved in 256 vehicle pursuits (81.5%), followed by White suspects (31, 9.9%),

---

<sup>9</sup> Note: 8 missing cases.

<sup>10</sup> Note: 8 missing cases.

<sup>11</sup> Note: 111 missing cases.

<sup>12</sup> Note: 8 missing cases.

<sup>13</sup> Note: 70 missing cases.

<sup>14</sup> Note: 1148 missing cases.

<sup>15</sup> Suspect demographics focus solely on the suspect considered to be the driver in the pursuit.

Hispanic suspects (25, 8.0%), and Asian suspects (2, 0.6%)<sup>16</sup>. Of the pursuits where gender was available, 304 suspects (93.0%) were male, and 23 suspects were female (7.0%)<sup>17</sup>.

Suspects ranged in age from 13 years old to 78 years old, with a mean of 30 years old and a mode of 25 years old. Sixty-one of the suspects were juveniles (6.5%). Suspects were apprehended in 889 vehicle pursuits (92.0%), while in 77 vehicle pursuits (8.0%) suspects were not apprehended<sup>18</sup>. Suspects reported injuries in 124 of the pursuits.

## CONCLUSION

MPD officers have participated in 1,688 vehicle pursuits between 2002 and 2009. In general, pursuits reached a maximum speed of 50 miles per hour, covered a distance of 1 to 2 miles, lasted an average of 4 minutes from start to termination, resulted from a traffic violation, and ended because the subject stopped. The officer in the primary pursuit vehicle was in a marked squad and was a male Police Officer, 38 years old, with 11 years of service. The suspect was a male, 30 years old, and was apprehended.

This report provides data on the frequency and circumstances surrounding vehicle pursuits conducted by employees of the Milwaukee Police Department from 2002 to 2009<sup>19</sup>. While there is an abundance of missing data, the amount of data that is available can be used as a baseline measurement for future analyses of vehicle pursuits. Future reports can utilize this data to assess the implications of MPD policy, procedures, and training.

---

<sup>16</sup> Note: 1,374 missing cases.

<sup>17</sup> Note: 1,361 missing cases.

<sup>18</sup> Note: 722 missing cases.

<sup>19</sup> MPD's Standard Operating Procedure (SOP) 660 for Vehicle Pursuits was amended on March 26, 2010. Data presented in this report does not reflect the most recent SOP amendment. The full text of SOP 660, along with a message from FPC Executive Director Michael Tobin regarding the SOP amendment, is available on the FPC website at: <http://www.milwaukee.gov/fpc>.

## REFERENCES

Alpert, G. (1997). *Police Pursuit: Policies and Training* (NCJ 164831). Washington, DC: National Institute of Justice, Research in Brief.

Dunham, R., Alpert, G., Kenny, D.J., and Cromwell, P. (1998). High-Speed Pursuit: The Offenders' Perspective. *Criminal Justice and Behavior*, 25(1), 30-45.

Hill, J. (July 2002). High-Speed Police Pursuits: Dangers, Dynamics, and Risk Reduction. *FBI Law Enforcement Bulletin*, 14-18.

Schultz, D., Hudak, E., and Alpert, G. (April 2009). Emergency Driving and Pursuits: The Officer's Perspective. *FBI Law Enforcement Bulletin*, 1-7.

Schultz, D., Hudak, E., and Alpert, G. (March 2010). Evidence-Based Decisions on Police Pursuits: the Officer's Perspective. *FBI Law Enforcement Bulletin*, 1-7.