

BICYCLE CRASH ANALYSIS

2005



*TRANSPORTATION DIVISION
STUDIES GROUP*

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INTRODUCTION

The 2005 **Pedalcycle Crash Analysis** is a statistical review of the 276 pedalcycle crashes and the 276 pedalcyclists involved in crashes on the City of Mesa streets in 2005. It focuses on crashes involving pedalcycles and motor vehicles identified in the 2005 Police Accident Reports (PARs) investigated and reported by the City of Mesa Police Department. Crashes occurring on the Superstition Freeway (US 60), the Price Freeway (Loop 101) and the Red Mountain Freeway (Loop 202), which are under the jurisdiction of the Arizona Department of Public Safety, were not included in the analysis.

The database used to prepare this report was compiled and maintained by the Traffic Records Section of the Arizona Department of Transportation. Definitions and terms were extracted from the Arizona Traffic Accident Report Instruction Manual and Glossary, 6th Edition, dated 1998.

The purpose of analyzing pedalcycle traffic crashes is to better understand the underlying causes of collisions between pedalcycles and automobiles. Analysis of the crashes reveals facts about the types of streets where crashes happened, behavior of pedalcyclists and motorists that caused the crashes, the times of day and year crashes occur, and age and sex of bicyclists involved in pedalcycle/motor vehicle collisions. Once an understanding of the root causes of pedalcycle crashes is gained, the Transportation Division can do further analysis to determine if the traffic environment in the City of Mesa can be made safer for pedalcyclists. Analysis of pedalcycle crashes also helps in developing appropriate messages for educating the public on safer pedalcycling habits and how pedalcyclists and motorists can best share the streets in the City of Mesa.

Pedalcycle crashes that were not traffic related, that is, crashes that occurred at a location other than a public roadway or adjacent sidewalk and for which no PAR was submitted, are not included in this report. Based on national studies, the majority of non-fatal pedalcycle crashes are not traffic related and anyone seeking to fully understand pedalcycle-crash causes and patterns should not rely solely on this report.

The percentages shown in certain tables may not add up to 100% due to rounding.

Questions or comments concerning this report should be directed to City of Mesa, Transportation Division, P.O. Box 1466, Mesa, Arizona, 85211-1466, (480) 644-2160.

EXECUTIVE SUMMARY

An analysis of the pedalcycle crashes in 2005 did not identify any significant changes in the trends from 2004 in the City of Mesa.

Pedalcycle crashes increased in frequency from 2004, but were lower than the 2001 and 2003 levels.

There were four fatal pedalcycle crashes.

The number of incapacitating injuries increased slightly to 8.3% of all crashes.

Pedalcyclists were considered most at fault in 68.1% of all crashes involving pedalcycles and motor vehicles.

Pedalcyclists riding against traffic on sidewalks, in crosswalks or in bike lanes were a contributing factor in 56.8% of all pedalcycle crashes.

When the data is normalized, the 10 to 14 year old age group had the highest over representation in crashes of all age groups.

The average age of all pedalcyclists involved in a crash was 28.6 and the median age was 23.

Male pedalcyclists were involved in 78.3% of all pedalcycle crashes.

Of all pedalcycle related crashes occurring within the city limits of Mesa, 44.6% occurred within a 2-1/2 mile radius of downtown Mesa. Pedalcycle crashes occurring west of or on Gilbert Road accounted for 68.1% of all crashes. Main Street had the highest frequency of all streets with 8.0%.

Pedalcycle crashes occurring on arterial streets or intersections having at least one arterial approach accounted for 73.9% of all crashes.

Pedalcycle crashes occurring on weekdays accounted for 85.9% of all crashes.

The hour of 4:01 to 5:00 PM had the highest frequency of pedalcycle crashes.

Protective helmet usage was 2.2% for pedalcyclists involved in crashes.

Alcohol was associated with 15 crashes, or 5.4% of all pedalcycle related crashes.

DEFINITIONS

Head-On. A collision involving vehicles traveling in opposite directions wherein at least one of the vehicles crosses the roadway centerline.

Hit Pedalcyclist. A traffic accident that occurs when a vehicle collides with any other vehicle that is operated by pedals and propelled by human power.

Intersection Related Crash. A traffic crash where the first harmful event (1) occurs on an approach to, movement through or exit from an intersection and (2) has resulted from an activity, behavior, or control related to the intersection.

Left-Turn. A traffic crash that occurs when a left-turning vehicle collides with a through vehicle on the opposite approach of the left-turning vehicle.

Pedalcycle. A non-motorized vehicle operated by pedals and propelled by human power. Includes: bicycles, tricycles, unicycles, pedal cars, etc.

Possible Injury. Any injury reported or claimed which is not a fatal, incapacitating, or non-incapacitating evident injury. Includes such situations as nausea, hysteria, complaint of pain, and injuries not evident.

Rear-End. A collision with the rear of another vehicle, either moving or stopped (excluding parked vehicles).

Sideswipe, Same Direction. A collision with another vehicle or bicyclist traveling in the same direction.

Traffic Unit. A traffic unit is a vehicle, pedestrian, pedalcyclist, or rider on an animal involved in a motor vehicle traffic crash. It is **preferred** that police jurisdictions assign traffic **unit number 1** to the vehicle, pedestrian, pedalcyclist, or animal rider causing the collision, however, this procedure is not mandatory.

Unit Action. The action at the moment of and/or which most directly affected the crash.

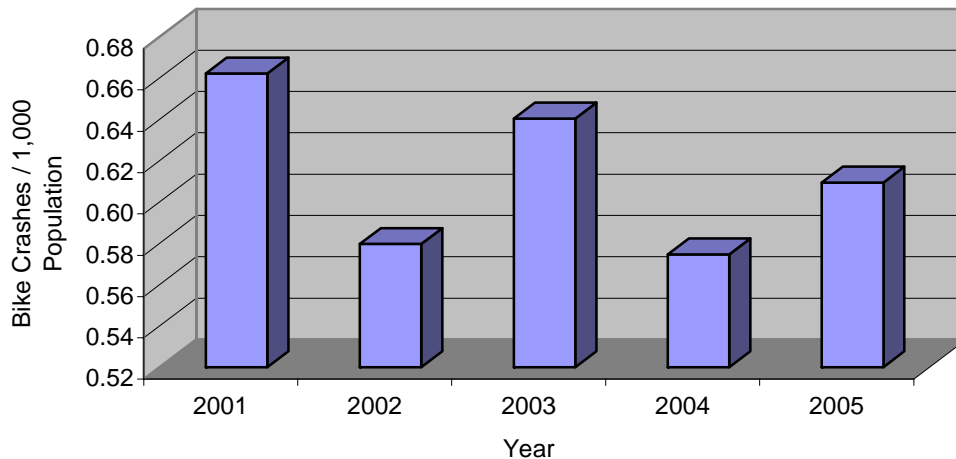
PEDALCYCLE CRASH RATE

Although the number of pedalcycle crashes has fluctuated over the past five years, the frequency of pedalcycle crashes in 2005 is just over the five year average. When the number of crashes is normalized by looking at how many pedalcycle crashes occur per every 1,000 people in Mesa’s population in a given year, the crash rate in 2005 was 0.61. Normalization puts into perspective an increase or decrease in the number of pedalcycle crashes when there is a concurrent rise in the number of drivers, cyclists and automobiles due to population growth (and a consequent increase in opportunities for pedalcycle/motor vehicle conflicts).

TABLE 1: PEDALCYCLE CRASH RATE—FIVE YEAR TREND

Year	Bicycle Crashes	All Traffic Crashes	Bicycle Crashes as Percent of All Crashes	Bicycle Crashes Per 1,000 Population	Estimated Population
2001	284	9,928	2.9%	0.66	428,883
2002	254	9,155	2.8%	0.58	438,181
2003	282	8,520	3.3%	0.64	440,404
2004	258	9,184	2.8%	0.57	449,017
2005	276	9,205	3.0%	0.61	452,856

CHART 1: PEDALCYCLE CRASH RATE—NORMALIZED BY 1,000 POPULATION



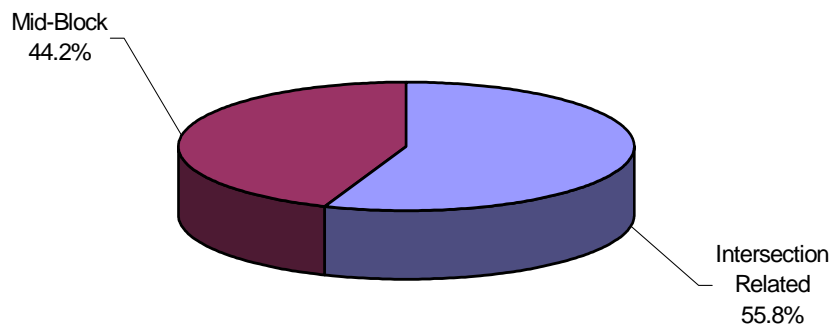
LOCATION - INTERSECTION vs MID-BLOCK

All crashes are categorized as either intersection related or mid-block. Mid-block crashes accounted for 44.2% of all pedalcycle crashes. This number is down from 49.2% in 2004. Although the number of mid-block crashes decreased, the injury severity of the pedalcyclists increased slightly. See Table 14, page 22. This increase could be attributed to the increase in number of crashes on arterial streets. See Table 3, page 9.

TABLE 2: LOCATION - INTERSECTION vs MID-BLOCK

Location	Number of Crashes	Percent of Total Pedalcycle Crashes
Intersection Related	154	55.8%
Mid-Block	122	44.2%
TOTAL	276	100.0%

CHART 2: LOCATION - INTERSECTION vs MID-BLOCK



STREET CLASSIFICATION

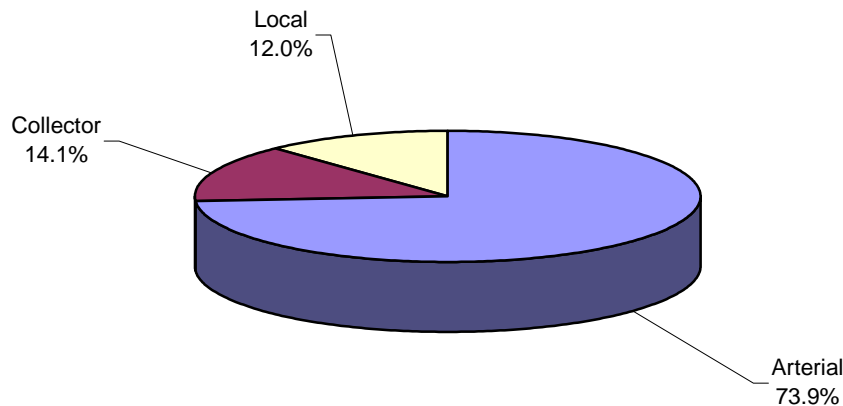
In 2005, 73.9% of all pedalcycle crashes occurred on arterial streets or at intersections having at least one arterial street. Arterial streets are roadways that often extend across city boundaries, carry large volumes of traffic, and may have limited access to properties along the roadway. Country Club Drive and Southern Avenue are examples of arterial streets. The remainder of pedalcycle crashes occurred on collector or local streets. Collector streets typically funnel traffic from local streets. Examples of collector streets are Longmore, Alta Mesa and 8th Street. Local streets are low volume streets in residential and commercial areas.

Pedalcycle crashes increased on arterials from 168 in 2004 to 204 in 2005, while decreasing on local streets from 42 in 2004 to 33 in 2005. As stated earlier, injury severity to the pedalcyclists also increased.

TABLE 3: STREET CLASSIFICATION

On Street	Number of Crashes	Percent of All Pedalcycle Crashes
Arterial	204	73.9%
Collector	39	14.1%
Local	33	12.0%
TOTAL	276	100.0%

CHART 3: STREET CLASSIFICATION



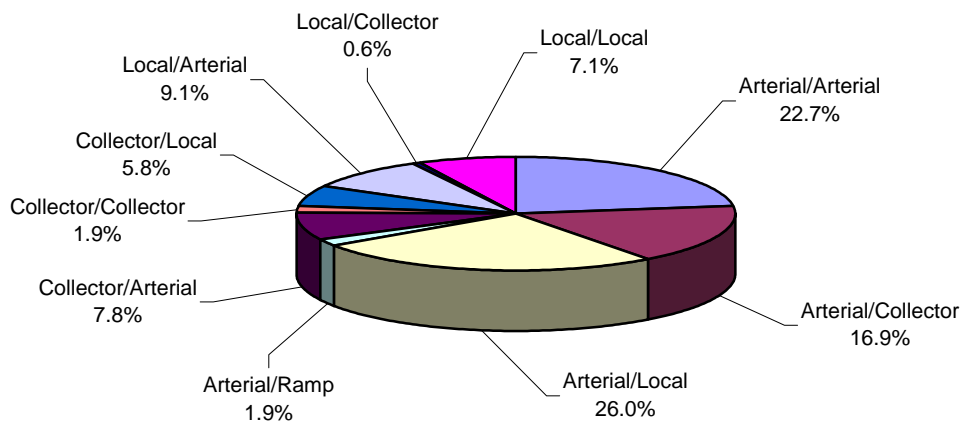
INTERSECTION CLASSIFICATION

TABLE 4: INTERSECTION CLASSIFICATION

As previously stated, 154 crashes were intersection related. The intersections where these crashes occurred are classified by on street (approach where crash occurred) and cross street.

Type of Intersection	Number of Crashes	Percentage of Intersection
Arterial/Arterial	35	22.7%
Arterial/Collector	26	16.9%
Arterial/Local	40	26.0%
Arterial/Ramp	3	1.9%
Collector/Arterial	12	7.8%
Collector/Collector	3	1.9%
Collector/Local	9	5.8%
Local/Arterial	14	9.1%
Local/Collector	1	0.6%
Local/Local	11	7.1%
TOTAL	154	100.0%

CHART 4: INTERSECTION CLASSIFICATION



LOCATION AND DIRECTION OF PEDALCYCLIST TRAVEL

When pedalcyclists riding off the sidewalk into the travelway are added to the number of pedalcyclists already in the travelway, 81.2% of all pedalcycle related crashes occurred in the roadway. The remaining 18.8% involved the collision of pedalcyclists on sidewalks with motor vehicles primarily entering or exiting private driveways.

The majority, 56.8%, of all pedalcyclists involved in crashes were traveling against the flow of traffic - either in the traffic way, bicycle lane, crosswalk or sidewalk. This number is down from 61.0% in 2004.

Pedalcyclists riding on the sidewalk against the flow of traffic continued to be the category with the highest percentage, 15.6%, of all crashes. Pedalcyclists riding off the sidewalk into the travelway against the flow of traffic at an intersection had the second highest frequency.

TABLE 5: LOCATION AND DIRECTION OF PEDALCYCLIST TRAVEL

Location and Direction	Number of Crashes	Percent of Total Crashes	Sum of Location
Midblock			
Across Roadway	34	12.3%	12.3%
Sidewalk			
Private Drive - Against Traffic	43	15.6%	32.6%
Intersection - Against Traffic (Ride out)	36	13.0%	
Private Drive - With Traffic	5	1.8%	
Intersection - With Traffic (Ride out)	6	2.2%	
In Crosswalk			
Against Traffic	30	10.9%	17.1%
With Traffic	17	6.2%	
In Bike Lane			
With Traffic	9	3.3%	13.0%
Against Traffic	0	0.0%	
Private Drive - Against Traffic	4	1.4%	
Intersection - Against Traffic	8	2.9%	
Private Drive - With Traffic	6	2.2%	
Intersection - With Traffic	9	3.3%	
In Roadway			
With Traffic	5	1.8%	23.6%
Against Traffic	4	1.4%	
Private Drive - Against Traffic	11	4.0%	
Intersection - Against Traffic	21	7.6%	
Private Drive - With Traffic	5	1.8%	
Intersection - With Traffic	19	6.9%	
Unknown	4	1.4%	1.4%
TOTAL	276	100.0%	

UNIT 1 ACTION PRIOR TO CRASH

Pedalcyclists were the unit most at fault, U1, in 68.1% of all pedalcycle/motor vehicle crashes. This number is up from 61.6% in 2004. Pedalcyclists most at fault were most frequently going straight when the crash occurred. Motor vehicle operators were most at fault most frequently when they were executing right turns.

TABLE 6: UNIT 1 - MOTORIST vs PEDALCYCLE

Unit 1 Action	Number of Crashes	Percent of Total Crashes
Going Straight Ahead		
Pedalcyclist	157	56.9%
Motorist	21	7.6%
Making Right Turn		
Pedalcyclist	6	2.2%
Motorist	47	17.0%
Making Left Turn		
Pedalcyclist	7	2.5%
Motorist	16	5.8%
Other Action		
Pedalcyclist	7	2.5%
Motorist	1	0.4%
Changing Lanes		
Pedalcyclist	1	0.4%
Motorist	3	1.1%
Unknown		
Pedalcyclist	10	3.6%
Motorist	0	0.0%
TOTAL	276	100.0%
PEDALCYCLIST	188	68.1%
MOTORIST	88	31.9%

MOTOR VEHICLE ACTION PRIOR TO CRASH

Almost half, 47.8%, of all motor vehicles, both Unit 1 and Unit 2, involved in pedalcycle crashes were either executing or starting to execute a right turn. Couple the driver's primary attention to the left with the pedalcyclist's approach from the right (against the flow of traffic), and the probability of a crash is significantly increased.

TABLE 7: MOTOR VEHICLE ACTION PRIOR TO CRASH

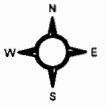
Motor Vehicle Action Prior to Crash	Number of Instances	Percentage of Total
Making Right Turn	132	47.8%
Going Straight*	110	39.9%
Making Left Turn	21	7.6%
Other	4	0.7%
Changing Lanes	3	1.4%
Slowing in Traffic	2	1.1%
Stopped in Traffic	1	0.4%
U-Turn	1	0.4%
Overtaking or Passing	1	0.4%
Unknown	1	0.4%
TOTAL	276	100.0%

* Includes motor vehicles leaving alleys or driveways with action that could not be determined.

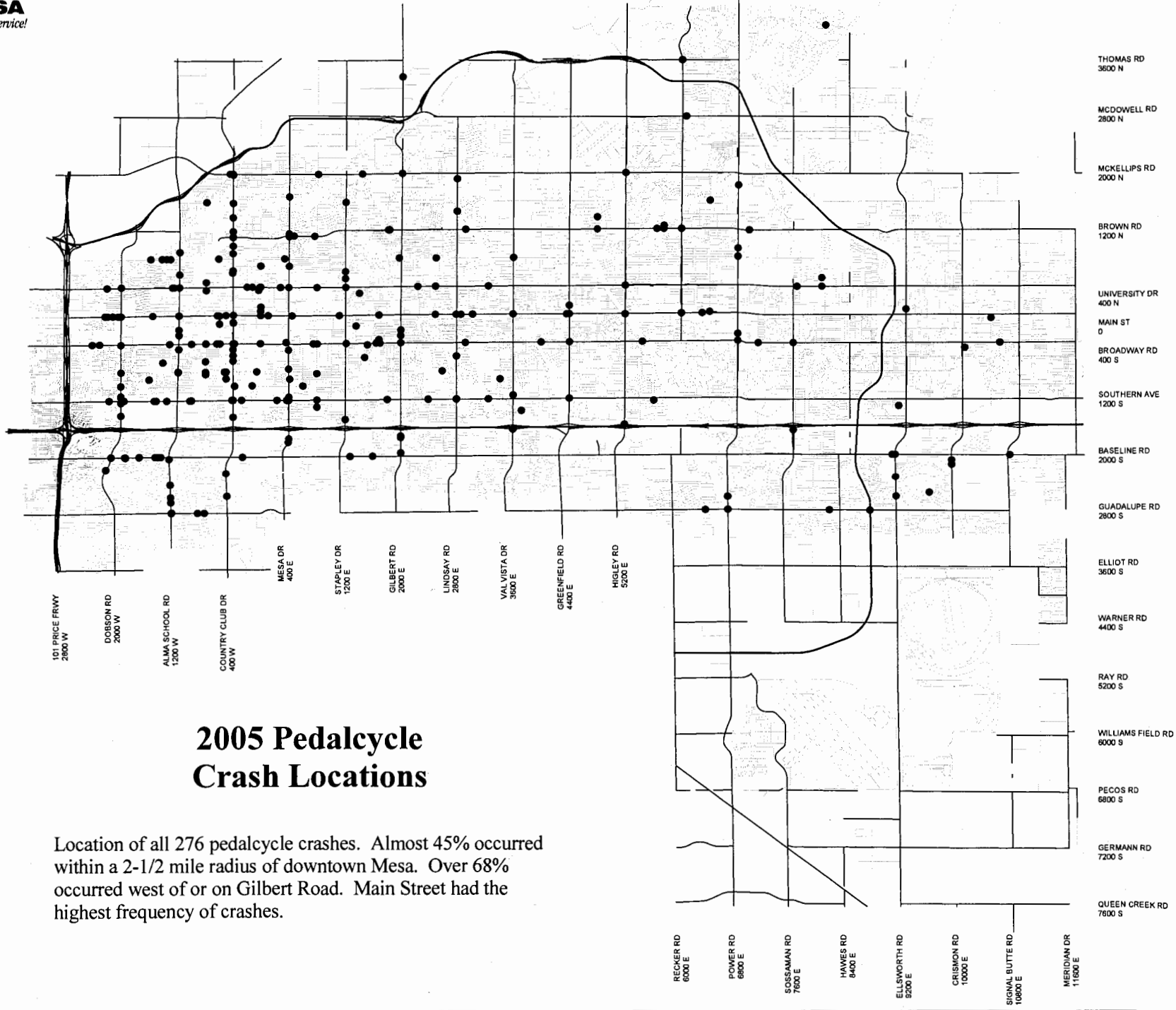
GEOGRAPHIC LOCATION

Of all pedalcycle related crashes occurring within the city limits of Mesa, 44.6% occurred within a 2-1/2 mile radius of downtown Mesa. One hundred eighty-eight, 68.1%, occurred on or west of Gilbert Road. Main Street had the highest frequency of any single street with 22 or 8.0%. Country Club Drive had the second highest frequency with 20 or 7.3%.

All of the above numbers involving geographic location were down slightly from 2004 as Mesa's population center continues to move to the east.



The City of Mesa makes no claims concerning the accuracy of the data provided nor assumes any liability resulting from the use of the information herein.



2005 Pedalcycle Crash Locations

Location of all 276 pedalcycle crashes. Almost 45% occurred within a 2-1/2 mile radius of downtown Mesa. Over 68% occurred west of or on Gilbert Road. Main Street had the highest frequency of crashes.

AGE AND GENDER OF PEDALCYCLISTS

Certain groups of pedalcyclists, defined by age and sex, have a greater probability of being involved in pedalcycle crashes. When the number of crashes is normalized by looking at how many pedalcycle crashes occur per every 1,000 people in each age group, it is readily apparent that the 10 - 14 year old group is over represented. This group is followed by the 15 - 19 year olds. These are the same age groups that were over represented in 2003 and 2004.

TABLE 8: AGE OF PEDALCYCLISTS

Age	Population*	Percent of Total Population	No. of Pedalcyclists Involved	% of Total Pedalcycle Crashes	Pedalcycle Crashes/ 1,000 Persons
Under 5	37,134	8.2%	0	0.0%	0.00
5 - 9	34,417	7.6%	15	5.4%	0.44
10-14	33,058	7.3%	66	23.9%	2.00
15 - 19	33,058	7.3%	33	12.0%	1.00
20 - 24	37,134	8.2%	23	8.3%	0.62
25 - 34	70,193	15.5%	41	14.9%	0.58
35 - 44	64,306	14.2%	34	12.3%	0.53
45 - 54	50,267	11.1%	30	10.9%	0.60
55 - 59	18,114	4.0%	13	4.7%	0.72
60 - 64	14,944	3.3%	3	1.1%	0.20
65 - 74	30,341	6.7%	6	2.2%	0.20
75 - 84	23,096	5.1%	3	1.1%	0.13
Over 84	6,793	1.5%	0	0.0%	0.00
Total	452,856	100.0%	267	96.7%	
Not Reported			9	3.3%	
Total	452,856		276	100.0%	

* Estimated population information provided by the City of Mesa Planning Division.

CHART 5: NORMALIZED CRASHES BY AGE PER 1,000 POPULATION

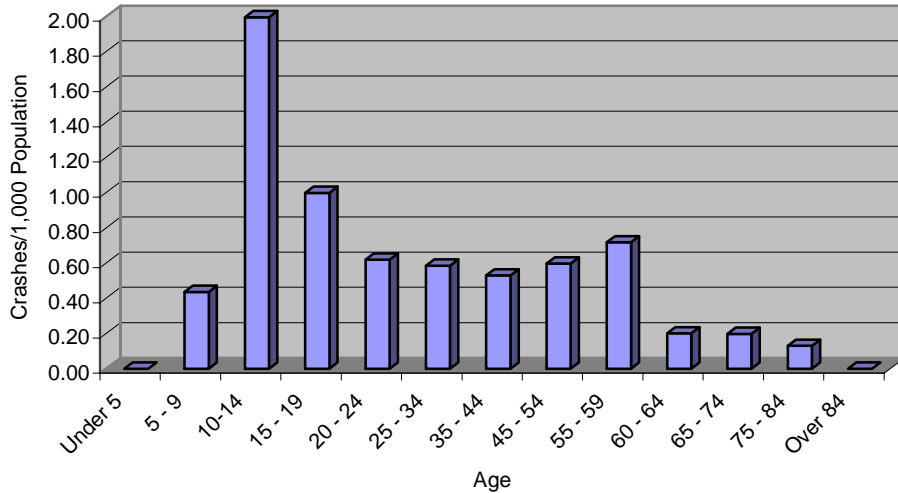
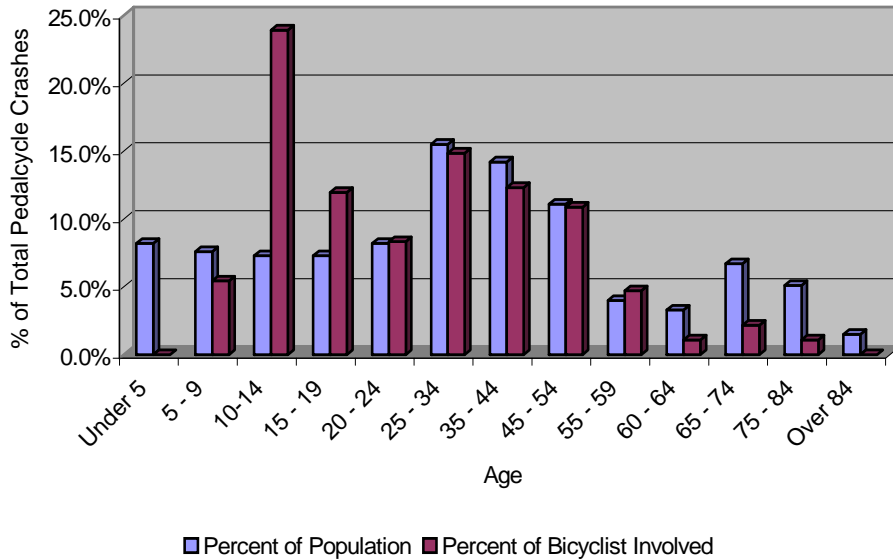


CHART 6: PERCENTAGE OF POPULATION vs PERCENTAGE OF CRASHES



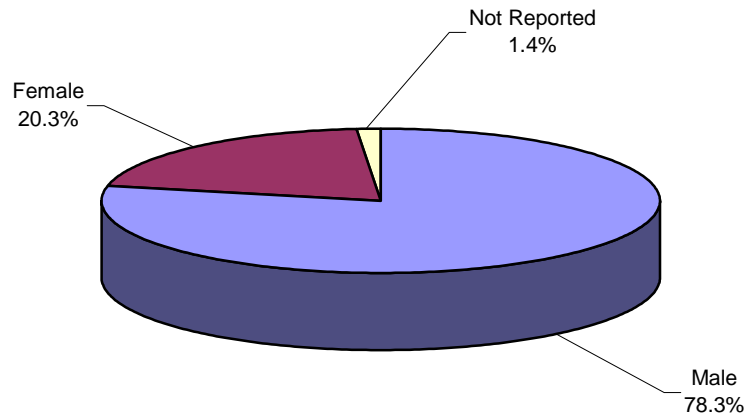
AVERAGE and MEDIAN AGE. The average age of pedalcyclists involved in crashes in 2005 was 28.6 vs 27.6 in 2004, and the median age was 23 in 2005 vs 22 in 2004. The average age of the motor vehicle operator was 38.9 and the median age was 37.

GENDER. Consistently, males have a much greater rate of involvement in pedalcycle crashes than do females. Mesa’s male population only comprises 49.5% of the total population, but males were involved in 78.3% of all pedalcycle crashes. See Table 9 on page 17.

TABLE 9: GENDER OF PEDALCYCLIST

Gender	No. of Pedalcyclists Involved	Percent of Total Crashes	Percent of Reported Gender	Percent of Estimated Population
Male	216	78.3%	79.4%	49.5%
Female	56	20.3%	20.6%	50.5%
Not Reported	4	1.4%		
Total	276	100.0%	100.0%	100.00%

CHART 7: GENDER OF PEDALCYCLIST



CAUSE OF PEDALCYCLE /MOTOR VEHICLE CRASHES

This analysis is based on the premise that in all Police Accident Reports (PAR), the unit that caused the collision or was most at fault is identified as Unit 1 as outlined in the *Arizona Traffic Accident Report Instruction Manual & Glossary*.

FAILURE TO YIELD. This violation was cited as the leading cause of pedalcycle crashes. The motor vehicle operator was cited 16.3% of the time and the pedalcyclist 13.4%.

OTHER. A review of the PARs seemed to indicate that this was a catch-all classification. If there appeared to be a question as to which operator was at fault, this violation was identified and attributed to the pedalcyclist 21.7% of the time.

DROVE IN OPPOSING TRAFFIC LANE. This violation accounted for 14.9% of all Unit 1 violations and ranked third.

TABLE 10: UNIT 1 VIOLATION

Violation - Unit 1	Number of Crashes	Percent of Total Crashes
Failure to Yield Right-of Way	82	29.7%
Pedalcyclist	37	13.4%
Motorist	45	16.3%
Other	70	25.4%
Pedalcyclist	60	21.7%
Motorist	10	3.6%
Drove in Opposing Traffic Lane	41	14.9%
Pedalcyclist	41	14.9%
Motorist	0	0.0%
Inattention	31	11.2%
Pedalcyclist	20	7.2%
Motorist	11	4.0%
Unknown	20	7.2%
Pedalcyclist	7	2.5%
Motorist	13	4.7%
Disregarded Traffic Signal or Sign	18	6.5%
Pedalcyclist	14	5.1%
Motorist	4	1.4%
Speed Too Fast for Conditions	5	1.8%
Pedalcyclist	3	1.1%
Motorist	2	0.7%
Made Improper Turn or Unsafe Lane Change	8	2.9%
Pedalcyclist	4	1.4%
Motorist	4	1.4%
Knowingly Operated with Faulty or Missing Equipment	1	0.4%
Pedalcyclist	1	0.4%
Motorist	0	0.0%
TOTAL	276	100%

TIME OF CRASHES

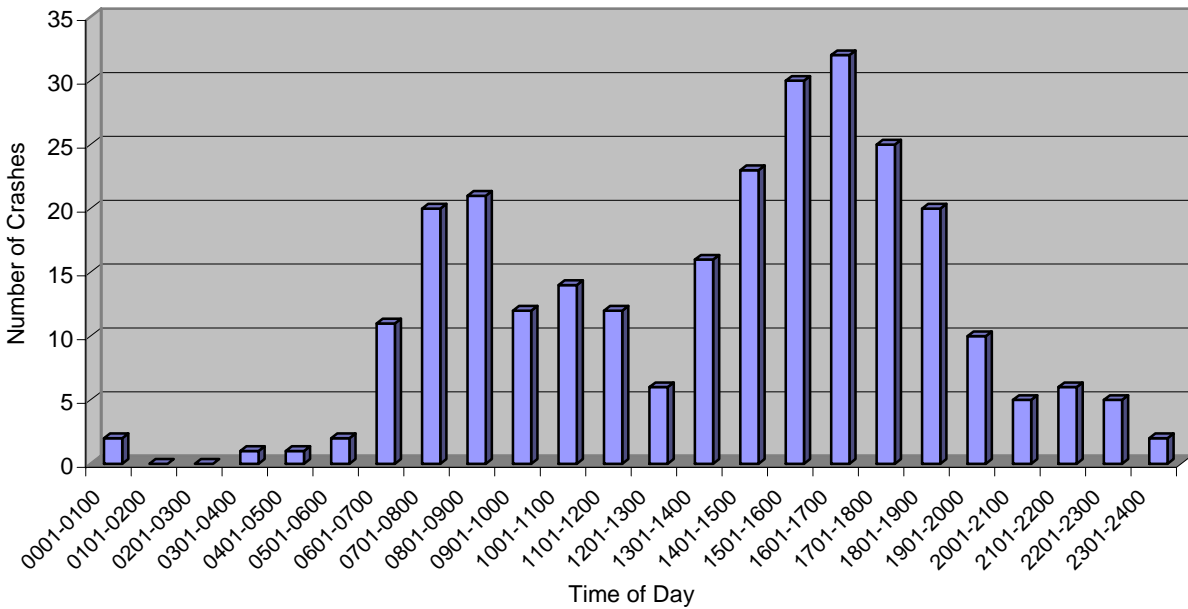
TIME OF DAY. The number of vehicles on Mesa's streets at any given time of day has a direct correlation to the likelihood of being involved in a pedalcycle traffic crash. As can be seen below, 4:01 - 5:00 PM had the highest frequency of crashes. The five hour period between 2:01 and 7:00 PM experienced 47.1% of all crashes. See Chart 8 on page 20.

TABLE 11: TIME AND DAY

Day Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	% of Crashes by Time
0001-0100	1	0	0	0	0	0	1	2	0.7%
0101-0200	0	0	0	0	0	0	0	0	0.0%
0201-0300	0	0	0	0	0	0	0	0	0.0%
0301-0400	0	0	0	0	0	1	0	1	0.4%
0401-0500	0	0	1	0	0	0	0	1	0.4%
0501-0600	0	1	0	0	0	1	0	2	0.7%
0601-0700	1	1	2	3	1	2	1	11	4.0%
0701-0800	0	5	5	5	2	3	0	20	7.2%
0801-0900	0	2	4	4	5	2	4	21	7.6%
0901-1000	0	2	4	3	0	2	1	12	4.3%
1001-1100	②	1	3	3	1	2	2	14	5.1%
1101-1200	②	2	1	2	2	1	2	12	4.3%
1201-1300	0	0	2	0	2	2	0	6	2.2%
1301-1400	1	0	1	5	0	⑦	2	16	5.8%
1401-1500	②	4	2	4	1	5	⑤	23	8.3%
1501-1600	1	3	6	6	5	6	3	30	10.9%
1601-1700	1	4	⑦	5	⑧	⑦	0	32	11.6%
1701-1800	②	⑥	3	5	5	4	0	25	9.1%
1801-1900	0	1	5	⑧	3	2	1	20	7.2%
1901-2000	0	0	1	3	2	2	2	10	3.6%
2001-2100	0	2	0	0	2	1	0	5	1.8%
2101-2200	0	2	1	1	0	2	0	6	2.2%
2201-2300	0	1	0	0	2	0	2	5	1.8%
2301-2400	0	0	0	1	0	1	0	2	0.7%
TOTAL	13	37	48	58	41	53	26	276	100.0%

○ = Hour with highest crash frequency for that day.

CHART 8: TIME OF THE DAY



DAY OF THE WEEK and MONTH OF THE YEAR. Pedalcycle crashes occurring on weekdays accounted for 85.9% of all crashes. April had the highest number of crashes, while July had the fewest. See Table 12 and Chart 10 on page 21.

CHART 9: DAY OF THE WEEK

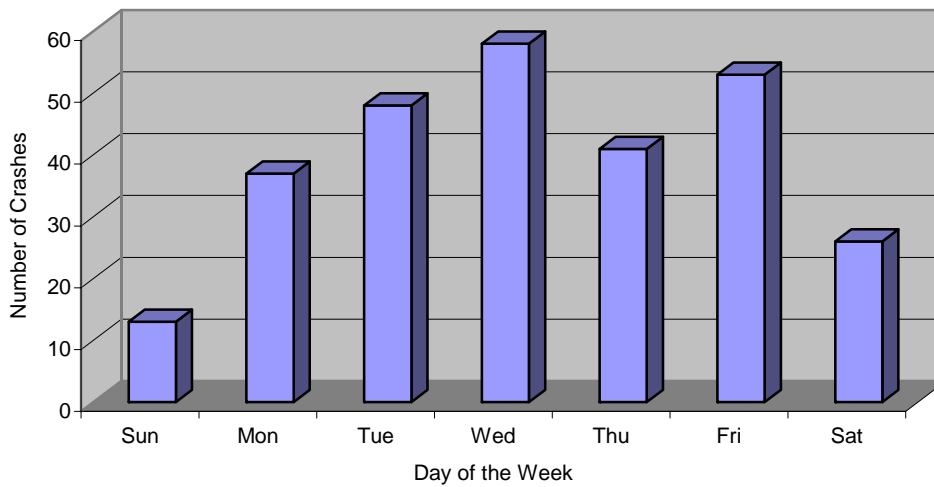
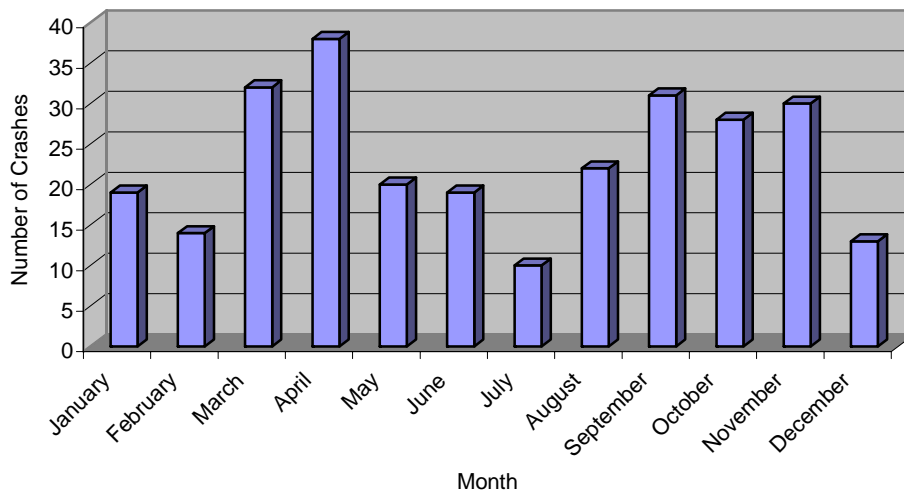


TABLE 12: MONTH OF THE YEAR

Month	Number of Crashes	Percent of All Crashes
January	19	6.9%
February	14	5.1%
March	32	11.6%
April	38	13.8%
May	20	7.2%
June	19	6.9%
July	10	3.6%
August	22	8.0%
September	31	11.2%
October	28	10.1%
November	30	10.9%
December	13	4.7%
TOTAL	276	100.0%

CHART 10: MONTH OF THE YEAR



FATALITIES AND INJURIES TO PEDALCYCLISTS

There were four pedalcycle fatalities in 2005. All four fatalities occurred on arterial streets. Three of the four involved pedalcyclists attempting to cross the arterial.

TABLE 13: PEDALCYCLE FATALITIES—FIVE YEARS

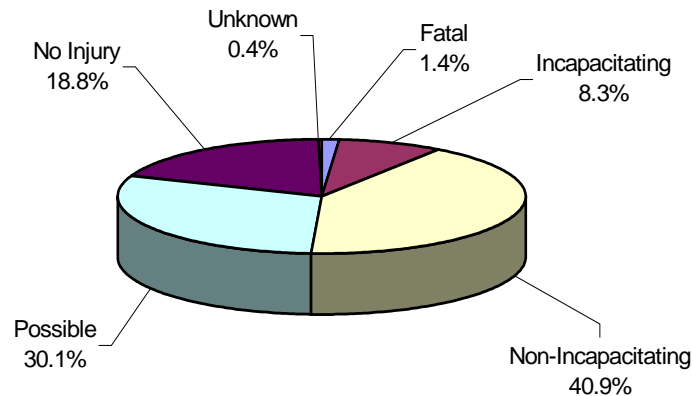
Year	Number of Pedalcycle Fatalities	Number of Fatalities - All Traffic Crashes	Percent of All Traffic Fatalities
2001	0	31	0.0%
2002	1	23	4.3%
2003	4	31	12.9%
2004	2	27	7.4%
2005	4	67	6.0%

INJURIES: Incapacitating and fatal injuries comprised 9.7% of all pedalcyclists’ injuries. This percentage increased from 8.6% in 2004. The slow speeds associated with motor vehicles exiting private driveways, starting to make right turns from stops, or pedalcyclists riding off a sidewalk into a motor vehicle, are typical actions that result in minor or no injuries.

TABLE 14: SEVERITY OF INJURIES SUFFERED IN BICYCLE CRASHES

Severity of Injury	Number of Occurrences	Percent of Total
Fatal	4	1.4%
Incapacitating	23	8.3%
Non-Incapacitating	113	40.9%
Possible	83	30.1%
No Injury	52	18.8%
Unknown	1	0.4%
TOTAL	276	100.0%

CHART 11: SEVERITY OF INJURIES



HIT AND RUN

There were 38 hit-and-run related pedalcycle crashes in 2005. This represented 13.8% of all pedalcycle related crashes and was up from the 9.3% in 2004.

HELMET USAGE

Of the 276 documented pedalcycle crashes, only 2.2% of the pedalcyclists were reported as wearing a protective helmet; however, this number may not reflect the actual numbers of pedalcyclists wearing helmets. A review of the PARs revealed that the design of the PAR could contribute to this statistic being reported as so low. Helmet usage is reported in the "Safety Device Code" block of the PAR. It was observed that on numerous PARs a "n/a" or "-" was entered in the Safety Device Code block instead of an appropriate device/restraint code. As stated, this administrative procedure could skew the helmet usage numbers; however, the narrative section of the PAR appears to substantiate low helmet usage.

PEDALCYCLE EQUIPMENT

In part the *Arizona Revised Statutes, Title 28*, states “A bicycle that is used at nighttime shall have a lamp on the front that emits a white light visible from a distance of at least five hundred feet to the front.” Forty-seven of the 276 bicycle crashes that occurred in 2005 occurred during the hours of dusk, dawn or darkness. In six, or 2.2%, of these crashes the pedalcycle operator was cited for a missing headlight. This was down from 8.9% in 2004.

ALCOHOL RELATED

Alcohol was associated with 15 crashes or 5.4% of all pedalcycle/motor vehicle crashes. Of these 15 crashes, the pedalcyclist had been drinking or was under the influence of drugs in 73.3% of the crashes which was up from 71.4% in 2004.