

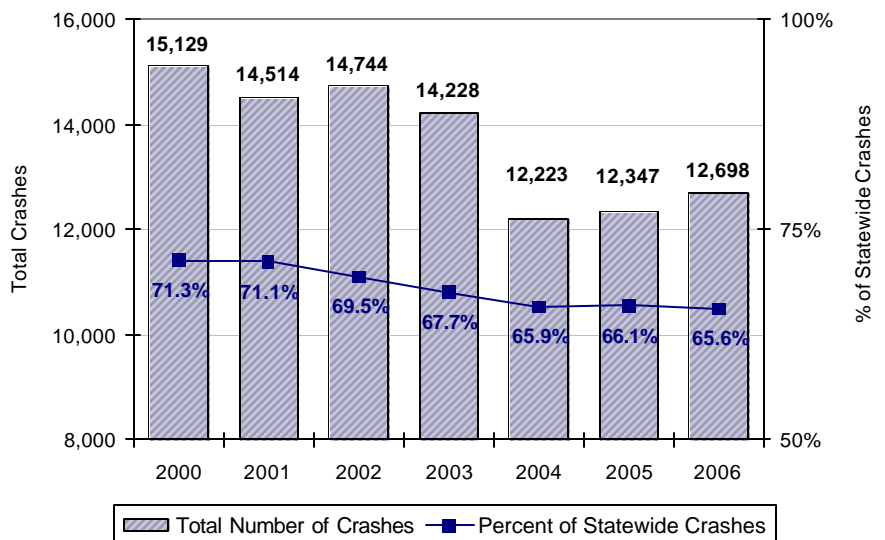
Crash Data 2000-2006

Crash Trends Decline for the WILMAPCO Region

By examining statistics we catch a glimpse of recent crash trends. This report compares overall crash trends for New Castle County, Delaware and Cecil County, Maryland. It lists segments of roadways with the highest intersection crashes and above-average crash rates for New Castle County.

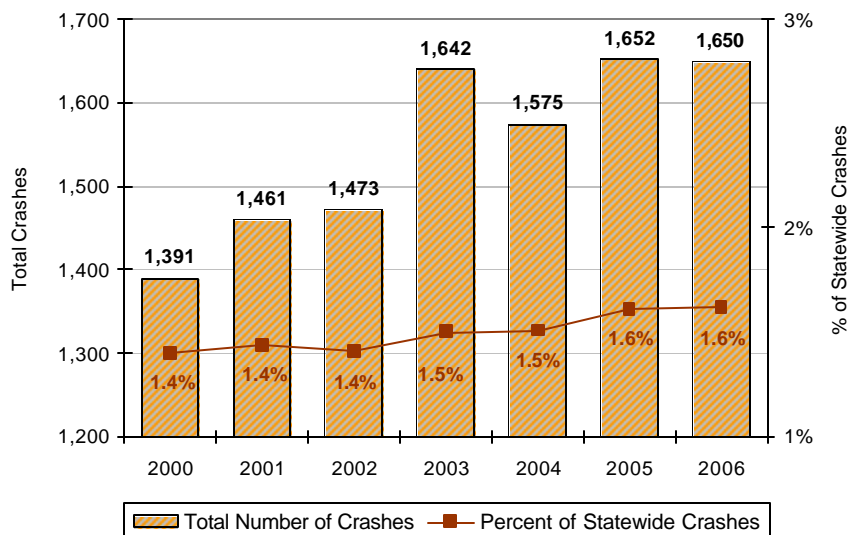
- Overall, total crashes declined by 13% between 2000 and 2006 in the WILMAPCO region.
- Between 2000 and 2006, total vehicle crashes declined by roughly 16% in New Castle County.
- Figure 1 shows the highest number of accidents was reported in 2000. Since then, crashes dropped by 2,431.
- There is a decreasing trend for total crashes in New Castle County, despite a subtle increase of 475 crashes (3.9%) from 2004 to 2006.
- New Castle County's rate of 2.5 accidents per million vehicles miles traveled is higher than Delaware's statewide rate of 2.2.
- From 2000 to 2006, Cecil County had a crash average of 1,549 per year. Total vehicle crashes spiked by 259 crashes, or 18.6%.
- In Cecil, the greatest annual increase took place from 2002 to 2003, by 169 crashes, or about 11%.
- There was an upward trend of crashes from 2000 to 2006 in Cecil, despite a subtle 4% decline in 2004.
- Cecil's accident rate of 1.3 per million vehicle miles traveled is slightly lower than Maryland's statewide rate of 1.9.

Figure 1: Total Crashes in New Castle County, 2000 to 2006



Source: Delaware State Police, Annual Traffic Statistical Reports, 2000-2005

Figure 2: Total Crashes in Cecil County, 2000 to 2006



Source: Maryland State Highway Administration, Office of Traffic & Safety

Total Crashes by Road Segments

Nine road segments, several of which are along Interstate 95, top the list of hazardous roads which have more than 500 crashes. While these nine segments have also been identified in our Congestion Management Systems (CMS) report, Table 1 below gives detailed information about each one.

- Road segments with more than 500 crashes were found only at locations north of the Chesapeake and Delaware Canal.
- Intersection crashes (1,078) accounted for 17% of total crashes (6,309) along the nine segments.
- Close to one-fifth (18.5%) of total crashes in the nine segments caused personal injuries.
- Less than 1% of crashes along these nine segments resulted in fatalities.
- Truck crashes along the nine segments comprised about 14%, and the highest rates were found along segments of I-95.
- Of total crashes, minimal pedestrian and bicycle crashes (0.81%) were reported at the nine locations.
- Locations along the I-95 corridor made up 68% of total crashes out of the nine segments.

Figure 3: Total Crashes by Road Segments in Northern New Castle County, 2000 to 2006

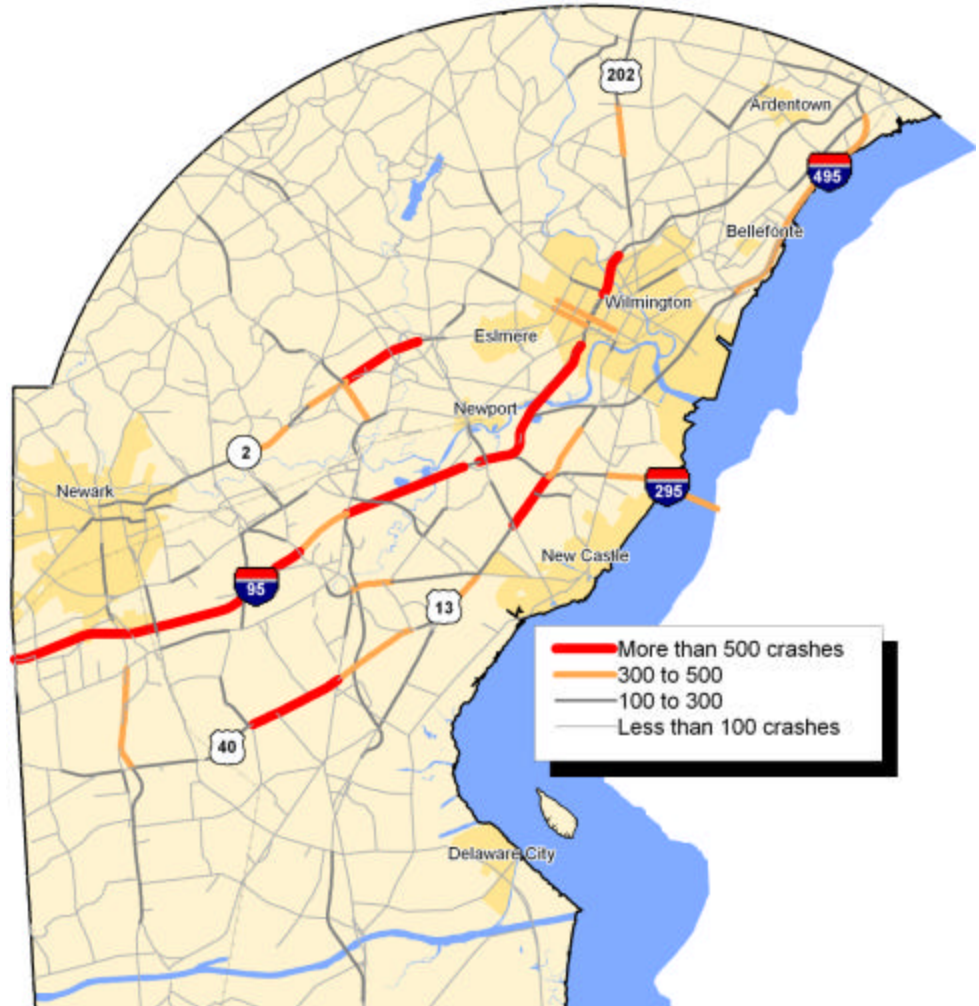


Table 1: Road Segments with 500+ Crashes, 2000 to 2006

Road Segment	Total Crashes	Intersection Crashes*	Personal Injuries	Fatalities	Truck Crashes	Pedestrian	Bicycle
1 I-95 from Airport Rd. offramp to SR 1	1,275	28	155	15	287	1	0
2 US 13 and US 40, from I-295 to Basin Rd.	859	417	114	1	125	12	2
3 I-95 from 896, South College Ave. to the MD state line	759	4	196	3	139	4	0
4 US 40, Pulaski Hwy from Newtown Rd. to Bear-Christiana Rd.	623	222	148	6	20	12	4
5 I-95 from Lower Beech St. to I-495 convergence	608	3	119	3	44	0	0
6 I-95 from 273, Christina Rd. to 896, South College Ave.	597	39	140	11	138	0	1
7 SR 2, Kirkwood Hwy from Newport Gap Pike to Limestone Rd.	539	324	160	2	17	12	1
8 I-95 from CSX Railroad to Delaware Ave.	528	26	69	3	28	1	0
9 I-95 from I-495 convergence to SR 141	521	15	66	3	98	1	0
Segment Totals	6,309	1,078	1,167	47	896	43	8

*Intersection crashes along interstates are located at ramps.

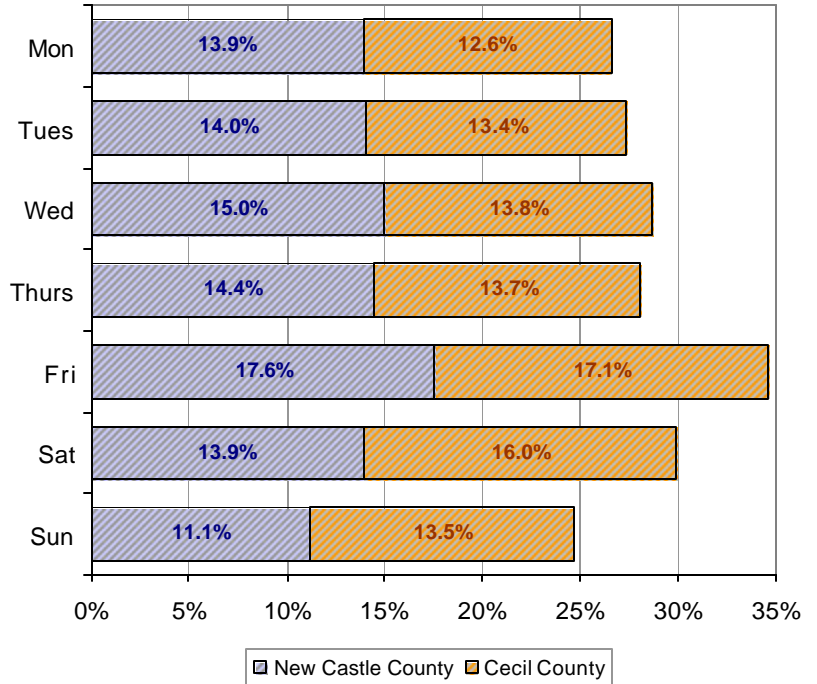
Sources: DelDOT, WILMAPCO

Note: Cecil County data is not yet available in a format that can be used for a full regional crash analysis.

Daily Crashes

- Generally, crashes declined per weekday for New Castle County and increased for Cecil County from 2002 to 2006.
- In both counties, Friday had the highest percentage of total crashes, whereas Sunday had the lowest percent of total crashes.
- In New Castle County, from 2002 to 2006, Thursday experienced the greatest decline in crashes by 19%. The least decline is observed on Wednesday by about 10%.
- In Cecil County, from 2002 to 2006, no decline in total crashes was experienced for any weekday. The greatest increase took place on Tuesday by 21.6%. The least increase was 4.4% on Saturday.

Figure 4: Percentage of Crashes by Weekday, 2002 to 2006

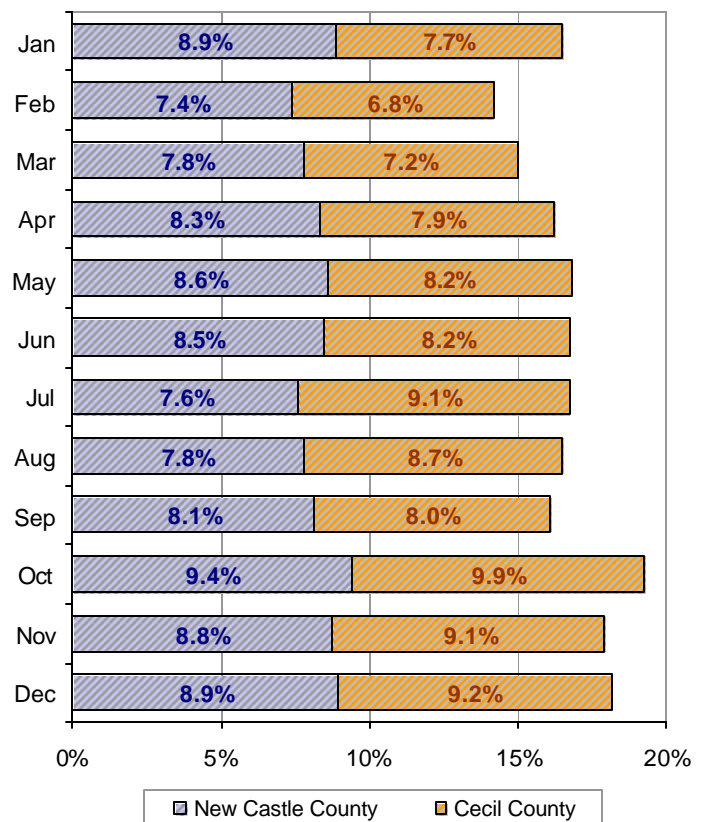


Sources: Delaware State Police, and Maryland State Highway Administration Office of Traffic & Safety 2000-2006

Monthly Crashes

- Overall, for the WILMAPCO region, the percentage of crashes spiked during the spring months and then dropped toward the end of the summer months.
- In both counties the most crashes by percent were seen during October and the least in February. From 2002 to 2006, regionally, the leading declines occurred in March by 25% and December by 19%.
- In New Castle County, from 2002 to 2006, March had the greatest decline in crashes by close to one-third (27.6%), followed by December (21%). April and June had the least decline of 6.5% and 7%, respectively.
- In Cecil County, from 2002 to 2006, June had the greatest percentage increase in crashes (35.4%) and April had the least (2.5%).
- Over a five-year stretch, July was the only month in Cecil which experienced a decline in total crashes. July had close to five a percent decline (4.7%).

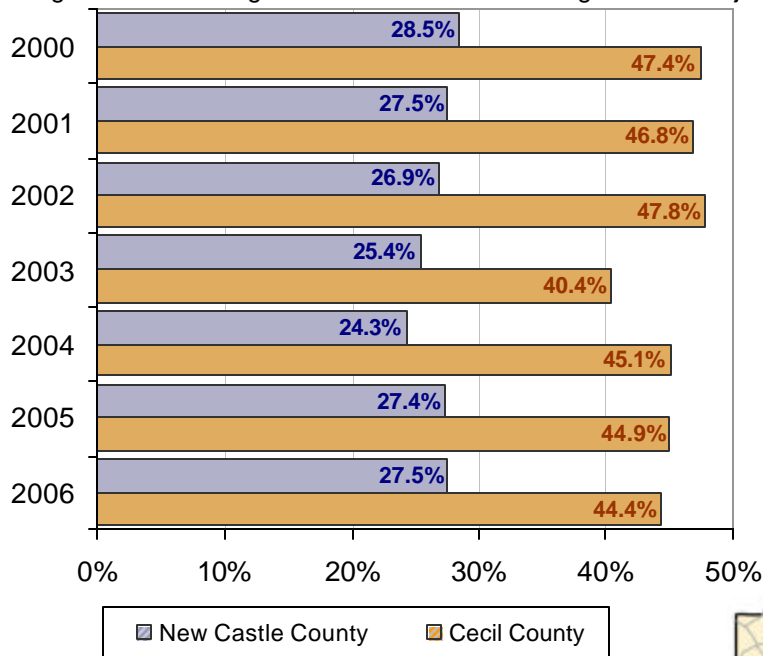
Figure 5: Crash Percentages by Month, 2002 to 2006



Sources: Delaware State Police, and Maryland State Highway Administration Office of Traffic & Safety 2000-2006

Personal Injury Crashes

Figure 6: Percentage of Total Crashes Involving Personal Injury



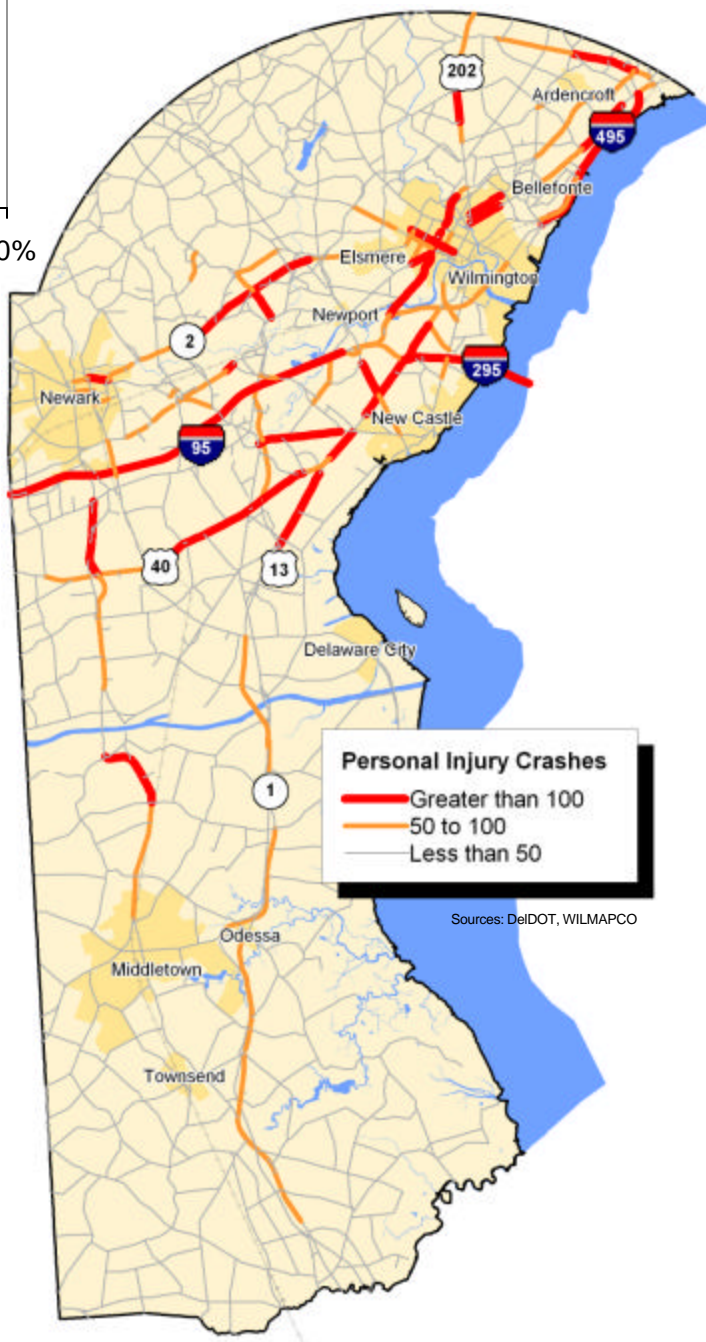
Sources: Delaware State Police, Annual Traffic Statistical Reports 2000-2005; Maryland State Highway Administration, Office of Traffic & Safety

- For the WILMAPCO region, personal injury crashes declined by 15% from 2000 to 2006.
- In New Castle County, personal injuries occur in roughly one-quarter (27%) of total crashes. From 2000 to 2006, injury crashes declined by 823, or 19%.
- In Cecil County, personal injury crashes made up 45% of total crashes. From 2000 to 2006, Cecil's total injury crashes spiked by 73 more injuries, or 11%.
- A notable decline of 6% occurred in Cecil County from 2002 to 2003, with 704 and 663 injury crashes, respectively. In short, Cecil followed an upward trend that peaked in 2005 with 741 crashes.

Personal Injury Crashes by Road Segment

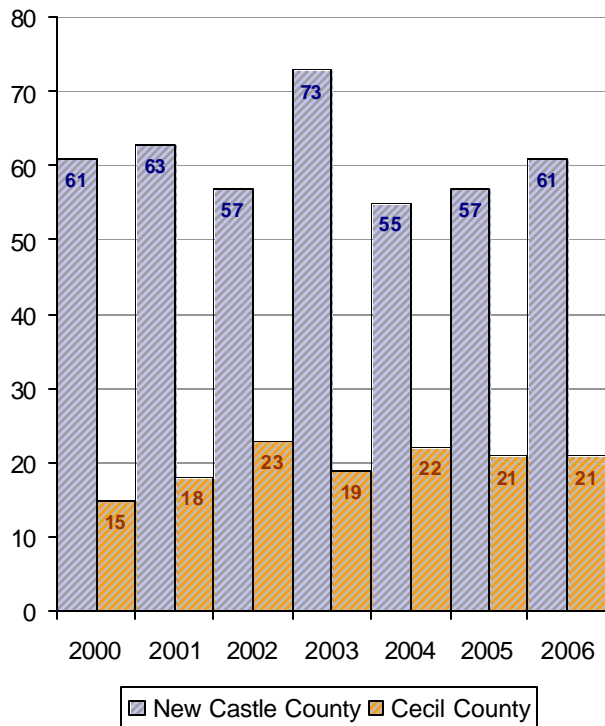
- A total of forty road segments were found to have 100+ injuries in New Castle County; together they comprise 40.3% of the countywide crashes.
- Many segments in New Castle County that show the highest number of personal injuries mirror those segments which had the greatest (500+) overall crashes.
- In New Castle County, road segments with the highest personal injuries are not primarily found along the Interstate corridors (as overall crashes were), but are found along principal arterials.

Figure 7: Personal Injury Crashes in New Castle County, 2000 to 2006



Fatal Crashes

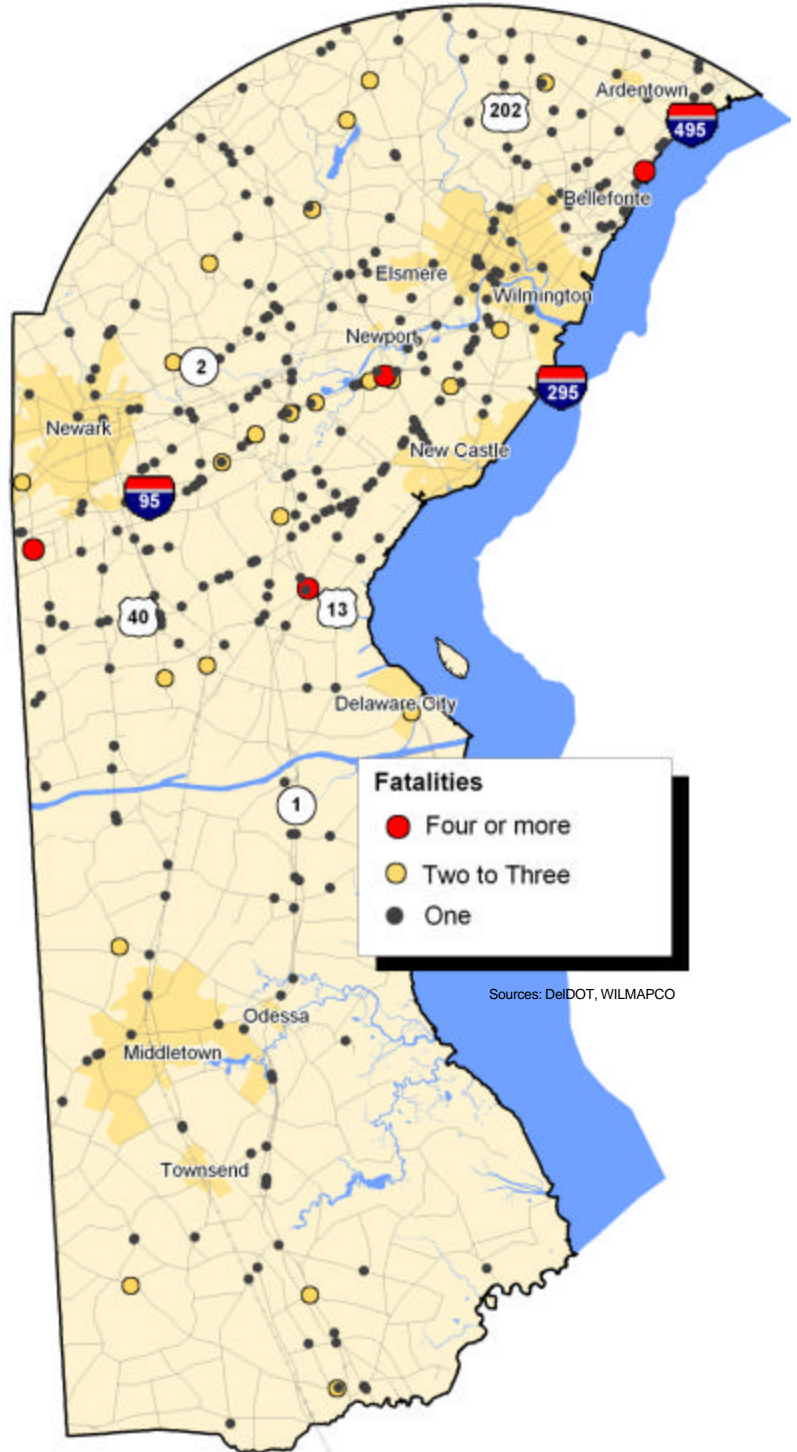
Figure 8: Total Fatal Injury Crashes



Sources: Delaware State Police, Annual Traffic Statistical Reports 2000-2005; Maryland State Highway Administration, Office of Traffic & Safety

- From 2000 to 2006, fatal crashes increased by roughly 8% for the WILMAPCO region .
- Despite downward trends in New Castle County's total and personal injury crashes, fatal crashes have remained stable. There were about 61 fatalities each year in New Castle County.
- From 2000 to 2006, New Castle County had a zero percent increase, while Cecil had an increase of 6 incidents, or 40%.
- Cecil County averaged 20 fatalities per year, accounting for just over 1% of total crashes in Cecil. Cecil's number of fatal accidents was approximately one-third the average number of fatalities in New Castle County per year.
- As shown in Figure 9, locations with at least one fatality are distributed throughout New Castle County. Three out of four of the highest fatality locations are along Interstates 95 and 495.

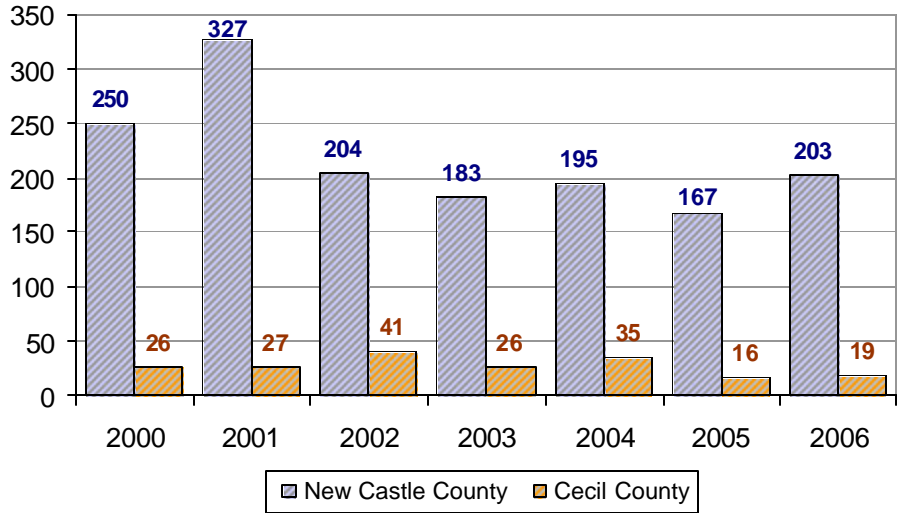
Figure 9: Locations of Fatal Crashes in New Castle County , 2000 to 2006



Pedestrian Crashes

- For the WILMAPCO region, pedestrian crashes experienced a 19.5% decline from 2000 to 2006.
- From 2000 to 2006, New Castle County averaged 221 pedestrian crashes, which is about 1.5% of average total crashes.
- Cecil County's yearly average for pedestrian crashes was 27, which is nearly 2% of average total crashes.
- The greatest rise in Cecil pedestrian crashes occurred from 2000 to 2002 by 58%. Generally, there was a 26% decline in pedestrian crashes over a seven year period.

Figure 10: Pedestrian Crashes in the WILMAPCO Region

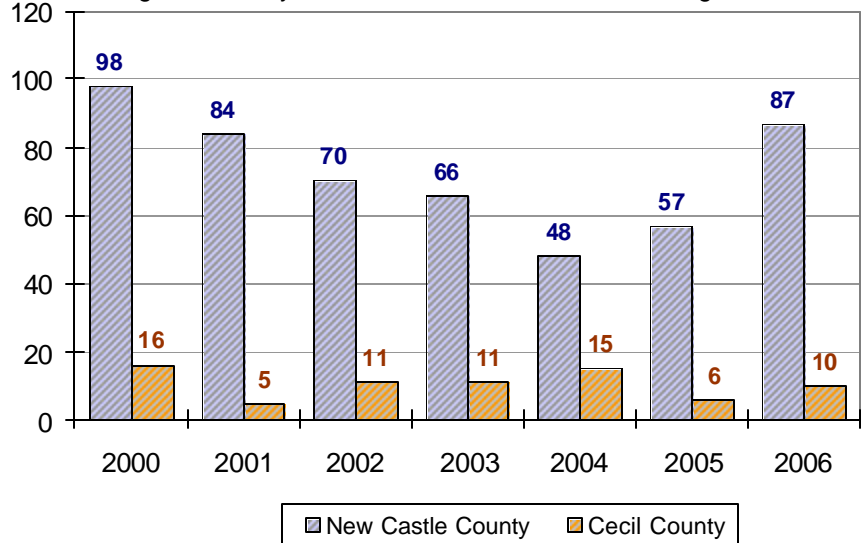


Sources: Delaware State Police, Annual Traffic Statistical Reports, 2000-2005; Maryland State Highway Administration, Office of Traffic & Safety

Bicycle Crashes

- For the WILMAPCO region, bicycle crashes fell by 14.9% from 2000 to 2006.
- In New Castle County, from 2000 to 2006, bike crashes dropped by eleven cases, or 11.2%.
- The most pronounced drop in New Castle County was witnessed from 2000 to 2004, with a plunge of 51%.
- The greatest increase in New Castle County's bike crashes occurred from 2005 to 2006 by roughly 53%.
- In Cecil County, bicycle crashes averaged eleven incidents per year. Overall, Cecil's bike crashes declined by 37.5% from 2000 to 2006.

Figure 11: Bicycle Crashes in the WILMAPCO Region



Sources: Delaware State Police, Annual Traffic Statistical Reports, 2000-2005

Pedestrian and Bicycle Crashes

- From 2000 to 2006, New Castle County had a total of 1,529 pedestrian crashes, of which 35% took place at an intersection.
- During the same time, New Castle County had a total of 510 bike crashes. Most (65%) took place at an intersection.

Table 2: Non-Motorized Intersection Crashes in New Castle County

	Intersection Ped. Crashes	% of Total Ped. Crashes	Intersection Bike Crashes	% of Total Bike Crashes
2000	81	32.4%	76	77.6%
2001	84	25.7%	54	64.3%
2002	76	37.3%	46	65.7%
2003	71	38.8%	34	51.5%
2004	88	45.1%	44	91.7%
2005	61	36.5%	32	56.1%
2006	87	42.9%	46	52.9%
2000-2006	548	35.8%	332	65.1%

Overall Intersection Crashes for New Castle County

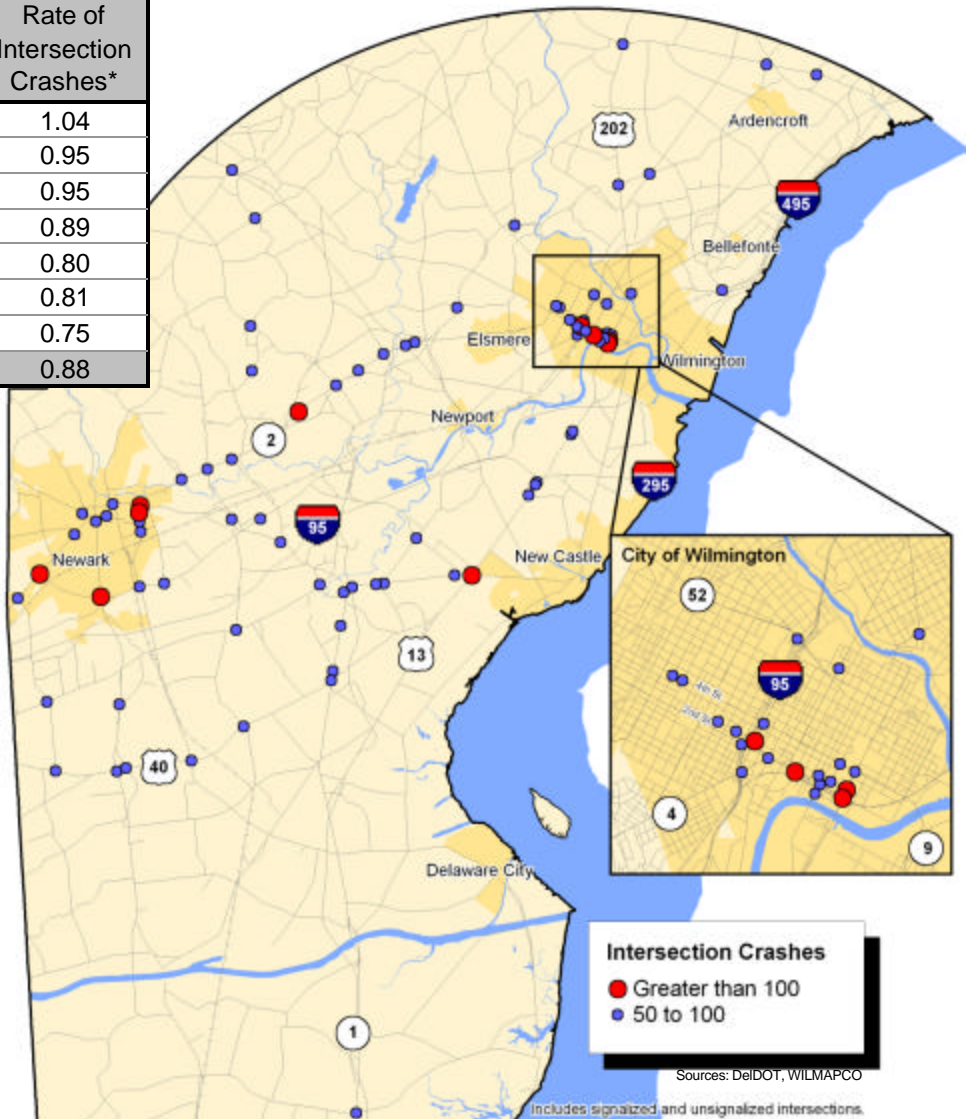
Table 3: Total Intersection Crashes in New Castle County

	Total Intersection Crashes	% of Total Crashes	Rate of Intersection Crashes*
2000	5,276	37.1%	1.04
2001	4,975	36.1%	0.95
2002	5,089	36.0%	0.95
2003	4,870	35.4%	0.89
2004	4,387	35.5%	0.80
2005	4,502	36.1%	0.81
2006	4,171	33.5%	0.75
2000-2006	33,270	35.7%	0.88

* Per 1 million vehicle miles traveled.

- An intersection crash is defined as occurring within 50 feet of an intersection. Due to crossing and turning movements, intersections create more traffic conflicts, which may result in crashes.
- Despite minor peaks in 2002 and 2005, intersection crashes in New Castle County have declined by 21% since 2000.
- Over the last seven years intersection crashes have represented a reasonable percentage of total crashes, a little over one-third.
- As vehicle miles traveled (VMT) have decreased in New Castle County, most notable is the continual decrease in total crash frequency per million VMT.
- Generally, many locations with a higher number of crashes (50+) are between the U.S. 40 and SR 2/SR 141 corridors.
- Table 4 lists Wilmington and Newark, the most populous municipalities county-wide, had the majority of the high-crash intersections.

Figure 12: High Intersection Crash Locations in Northern New Castle County, 2000 to 2006*



*Intersection crashes along interstates are located at ramps.

Table 4: Top Ten Intersection Crash Locations

Intersection	Location	Total
SR 896, S. College Ave. and SR 4, Chestnut Hill Rd.	Newark	189
Library Ave. and Del. 273, Newark-Christina Rd.	Newark	152
Front St. and Walnut St.	Wilmington	144
SR 273, Christina Rd. and US 13, DuPont Hwy.	NCC	143
Capitol Trail and Cleveland Avenue	Newark	132
SR 2, Elkton Rd. and SR 4, Chestnut Hill Rd.	Newark	130
SR 2, Kirkwood Hwy. and Milltown Rd.	NCC	128
M.L. King Blvd. and West St.	Wilmington	123
Second and Adams Sts.	Wilmington	117
Second St. and Walnut St.	Wilmington	105
SR 273, Christina Rd. and Airport Rd.	NCC	100

Note: Cecil County data is not yet available in a format that can be used for a full regional crash analysis.

Intersection Crash Rates for New Castle County

Figure 13: Above Average Intersection Crash Rates in Northern New Castle County, 2000 to 2006

- Figure 13 illustrates the locations which exceed the county intersection crash rate of 1.16 per million vehicles passing through an intersection.
- Locations above the county average are concentrated in Wilmington and Newark.
- In Table 5, all top ten locations with the highest intersection crash rates are found within the City of Wilmington. The majority are on Second and Fourth Streets.
- These top ten locations make up only 1.94% of county-wide intersection crashes from 2000 to 2006.

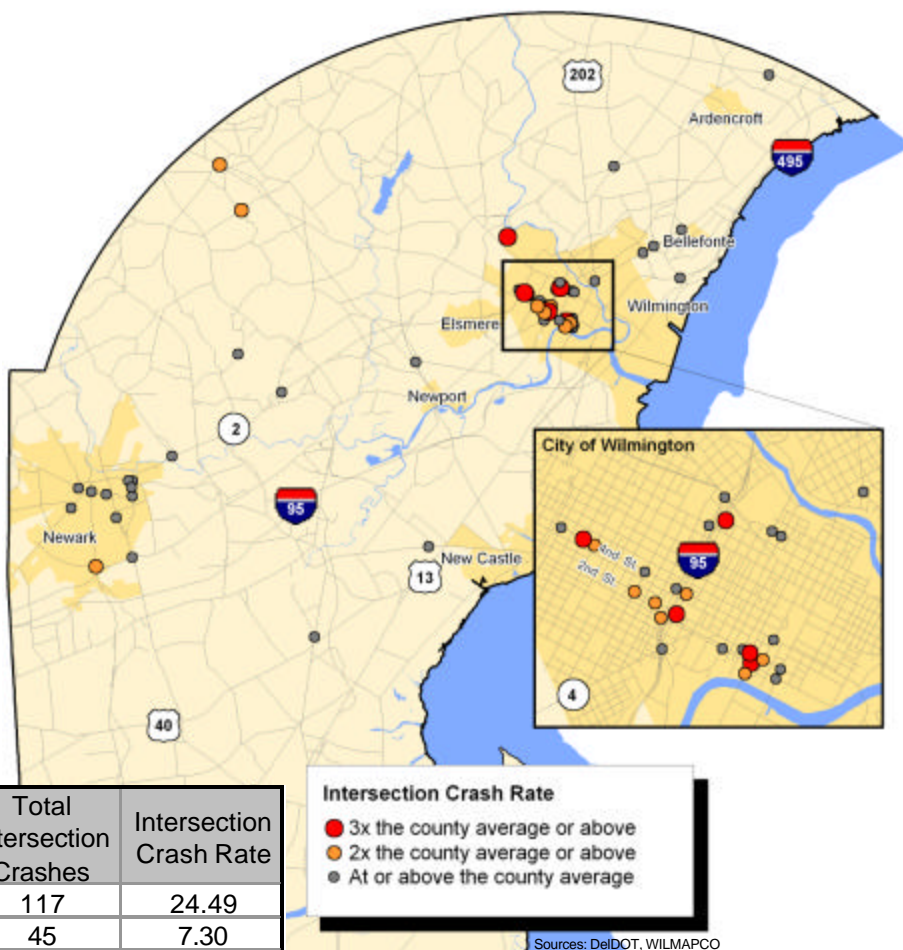


Table 5: Top Ten Locations with Highest Intersection Crash Rates

Intersection	Total Intersection Crashes	Intersection Crash Rate
Second St. at Adams St.	117	24.49
Pennsylvania Ave. and Rising Sun Lane	45	7.30
Adams St. at Eleventh St.	43	4.16
Martin Luther King Blvd. at Market St.	66	3.83
Second St. at Shipley St.	68	3.80
Fourth St. at Scott St.	58	3.48
Fourth St. at Adams St.	73	3.40
Fourth St. at Dupont St.	53	3.18
King St. at Second St.	64	3.06
Second St. at Van Buren St.	58	2.77

Sources: DelDOT, WILMAPCO

Truck Intersection Crashes for New Castle County

- From 2000 to 2006, 3,823 truck crashes occurred along roadways in New Castle County. In total, truck crashes made up 4 % of all crashes county-wide.
- Intersection truck crashes represented 37 % of total truck crashes.
- The sheer number of intersection truck crashes has increased by 13 % from 2000 to 2006.

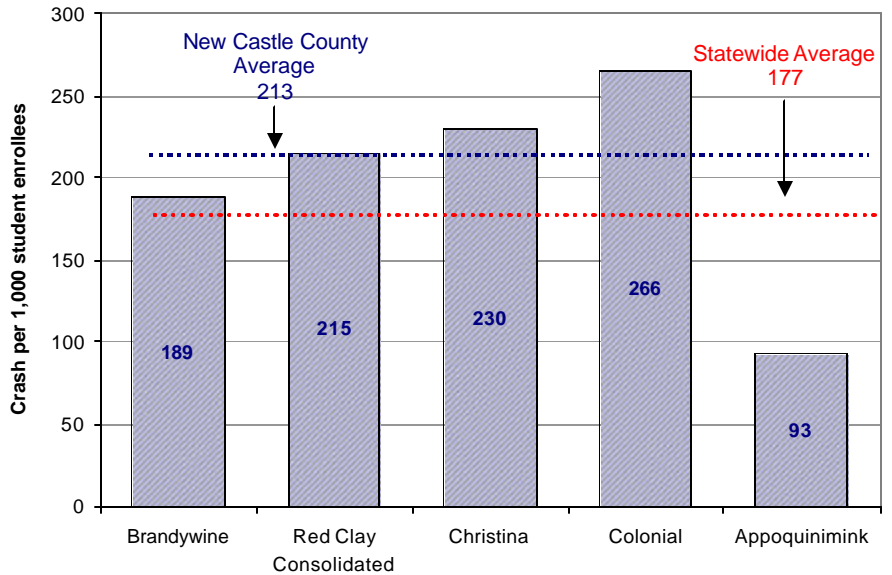
Table 6: Intersection Crashes Involving Trucks in New Castle County

	Intersection Truck Crashes	% of Total Truck Crashes
2000	201	34.4%
2001	185	33.6%
2002	180	34.9%
2003	179	34.3%
2004	205	39.8%
2005	229	40.2%
2006	229	40.5%
2000-2006	1,408	36.8%

Crashes Rates by School Districts in New Castle County

- From 2000 to 2006, the Appoquinimink school district witnessed an increase in crashes and student enrollment, but still remained the only district below the county- and state-wide crash average.
- Brandywine, Red Clay, Christina, and Colonial districts in New Castle County have shown a decline in student enrollment and total crashes, yet all four exceeded the statewide average for total crashes per 1,000 students enrolled.

Figure 14: Crashes by School Districts in New Castle County



Sources: Delaware Department of Education, WILMAPCO, DelDOT

Alcohol Related Crashes

- For the WILMAPCO region, the number of alcohol-related crashes fell by 5.4% between 2000 and 2006.
- New Castle County had a drop of 59 crashes from 2000 to 2006. Yet, alcohol-related crashes as a percentage of total crashes have remained stable, with less than a 1% change.
- From 2000 to 2006, alcohol-related incidents made up 7% of New Castle County's total crashes.
- In Cecil County, over seven years, alcohol-related incidents made up 12% of Cecil's total crashes, and demonstrated a subtle percentage decline.

Table 7: Alcohol-Related* Crashes in the WILMAPCO Region, 2000 to 2006

	New Castle County		Cecil County	
	Alcohol-Related Crashes	% of Total Crashes	Alcohol-Related Crashes	% of Total Crashes
2000	895	5.9%	188	13.5%
2001	859	5.9%	205	14.0%
2002	962	6.5%	184	12.5%
2003	839	5.9%	212	12.9%
2004	670	5.5%	182	11.6%
2005	807	6.5%	150	9.1%
2006	836	6.6%	188	11.4%
2000-2006	5,868	6.1%	1,309	12.1%

Sources: Delaware State Police and Maryland State Highway Administration Office of Traffic and Safety 2000-2006

*A crash is considered alcohol related if either the motorist or non-motorist involved has consumed alcohol, regardless of the blood-alcohol level.

Crash Data Sources

Crash analyses for this report have been conducted using two main sources of data:

- Delaware State Police, Office of Traffic Control, which collect and tabulate all traffic crash reports for annual compilations, and
- Maryland State Highway, Office of Traffic and Safety, which runs Maryland's highway traffic safety program and compiles annual reports of crash statistics.

These sources have provided the general county-wide statistical data for total crashes, personal injuries, fatalities, crashes by week and month, pedestrian, bicycle, and alcohol-related incidents. This information was tabulated for the WILMAPCO region and represented in easily understood formats of tables and graphs.

To look more specifically at trends in crash data, particularly along road segments, WILMAPCO and DeIDOT have compiled several Geographic Information System (GIS) files of all reported crashes and associated attribute data for calendar years 2000 to 2006 using the raw data from the Delaware State Police. This information is represented in map form as well as tables.

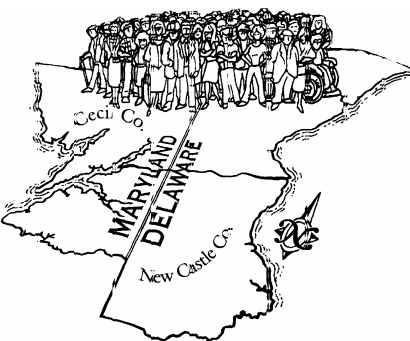
A combination of three GIS files were used to conduct the various analyses for New Castle County:

- Intersection Crashes – This consists of all crashes within 50 feet of an intersection, including annual totals for pedestrian, bicycle, and truck crashes at intersections.
- Crashes by Point – This table provided a more detailed review of the geographic location of each crash. For analysis of road segments using this point file, all points were aggregated to each individual road segment.
- Crashes by Road Segment – This includes all non-intersection crashes with annual totals for all crashes, bicycle, pedestrian, and truck crash totals. This only incorporates roads which are part of the DeIDOT Traffic Count book network, therefore small subdivision roads are not included.

This type of detailed analysis is only applicable to New Castle because Cecil County data is not yet available in a format that can be used to conduct a full crash analysis. When Cecil data becomes available, a detailed road segment analysis will be conducted.

SEPTEMBER 2008 – WILMAPCO DATA REPORT #6

The Wilmington Area Planning Council (WILMAPCO) is a Metropolitan Planning Organization serving New Castle County, DE and Cecil County, MD. Our mission is to serve the citizens and stakeholders of the region by carrying out a comprehensive, continuing and cooperative regional transportation planning process consistent with federal transportation legislation. This series of data reports is designed to summarize various data and information about our region to allow decision makers and members of the public to better understand the changes within our region. This document was created by the WILMAPCO Demographics and Data Subcommittee. For more information on this and other data reports, please visit our website at <http://www.wilmapco.org/data/index.htm>.



Other WILMAPCO Data Reports

Report #1: Regional Population Changes 1980-2000, September 2004

Report #2: Changes in Regional Population & Household Characteristics 1980-2000, December 2004

Report #3: Analysis of Commuter Flows to and from the WILMAPCO Region 1990-2000, July 2005

Report # 4: Regional Population Changes: 2000-2030, January 2006 (updated May 2007)

Report #5: Employment: 1990-2004, July 2006

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